

Declassified in Part - Sanitized Copy Approved for Release 2013/01/29 :
CIA-RDP81-01043R001300210004-6

Page Denied

STAT

Declassified in Part - Sanitized Copy Approved for Release 2013/01/29 :
CIA-RDP81-01043R001300210004-6

OFFICIAL USE ONLY

IDENTIFICATION HANDBOOK



SOVIET ORDNANCE EQUIPMENT

OFFICIAL USE ONLY

IDENTIFICATION HANDBOOK
SOVIET ORDNANCE EQUIPMENT

HEADQUARTERS
UNITED STATES ARMY EUROPE
OFFICE OF THE ASSISTANT CHIEF OF STAFF, G-2
APO 403 US ARMY

JULY 1957

FOREWORD

The object of this publication is to present the essential technical, tactical and recognition data on ordnance equipment presently employed by the Soviet Army.

The handbook is in a loose-leaf form to facilitate periodic amendments. Supplements and revisions will be issued as new information becomes available.

Every effort has been made to make this material comprehensive. Any recipient detecting discrepancies or possessing information on new or modified items should forward such information to this headquarters for inclusion in future amendments or revised editions.

This publication has been made possible through the efforts of the 91st Ordnance Detachment (Technical Intelligence Control), Office of Ordnance Officer, with the assistance of the Scientific and Technical Section, Intelligence Production Branch, Office of the Assistant Chief of Staff, G2, USAREUR.

John M. Willem
JOHN M. WILLEMS
Major General, GS
Assistant Chief of Staff, G2

TABLE OF CONTENTS

	Page
SMALL ARMS	1
Characteristics of Small Arms	2
7.62-mm Nagant Revolver M1895	6
7.62-mm Tokarev Pistol M1933 (TT-33)	10
9-mm Pistol Makarov (PM)	12
7.62-mm Mossin-Nagant Rifle M1891/30	14
7.62-mm Mossin-Nagant Carbine M1944	16
7.62-mm Tokarev Semiautomatic Rifle M1940	18
7.62-mm Semiautomatic Carbine Simonov (SKS)	20
7.62-mm Shpagin PPSH Submachine Gun M1941	22
7.62-mm Sudarev PPS Submachine Gun M1943	24
7.62-mm Submachine Gun "Kalashnikov" (AK)	26
7.62-mm DP Light Machine Gun	28
7.62-mm DPM Light Machine Gun	30
7.62-mm DT Tank Machine Gun	32
7.62-mm Light Machine Gun DTM	34

	Page
7.62-mm Company Machine Gun M1946 (RP-46)	36
7.62-mm Light Machine Gun RPD	38
7.62-mm Maxim Heavy Machine Gun M1910	40
7.62-mm Goryunov Heavy Machine Gun M1943	42
12.7-mm Heavy Machine Gun DShK M1938	44
14.5-mm Simonov PTRS Antitank Rifle M1941	46
GRENADES	48
F-1 Defensive Hand Grenade	50
RGD-33 Offensive/Defensive Hand Grenade	52
RG-42 Offensive Hand Grenade	54
RPG-40 Hand Grenade	56
RPG-43 Hand Grenade	58
RPG-6 Hand Grenade	60
ROCKET AND RECOILLESS ANTITANK WEAPONS	62
Infantry Antitank Launcher RPG-2	64
82-mm Recoilless Antitank Gun	66
107-mm Recoilless Antitank Gun	68

	Page
MORTARS	70
82-mm Mortar M1941	72
82-mm Mortar M1943	74
120-mm Mortar M1938	76
120-mm Mortar M1943	78
160-mm Mortar M1943	80
160-mm Mortar M1953	82
240-mm Mortar M1953	84
ARTILLERY	86
45-mm Antitank Gun M1942	90
57-mm Antitank Gun M1943 (ZIS-2)	92
76-mm Regimental Gun (Howitzer) M1927	94
76-mm Divisional Gun M1942 (ZIS-3)	96
85-mm Divisional Gun M1945	98
85-mm Auxiliary Powered Antitank Gun - APAT 65	100
100-mm Field Gun M1944 (BS-3)	102
100-mm Antitank Gun M1955	104

	Page
122-mm Howitzer M1938 (M-30)	106
122-mm Corps Gun M1931/37 (A-19)	108
122-mm Field Gun M1954	110
122-mm Field Gun M1955	112
152-mm Howitzer M1943 (D-1)	114
152-mm Howitzer M1955	116
152-mm Gun Howitzer M1937 (ML-20)	118
152-mm Gun M1935 (BR-2)	120
203-mm Howitzer M1931 (B-4)	122
203-mm Gun Howitzer M1955	124
210-mm Gun M1939 (BR-17)	126
280-mm Mortar (Howitzer) M1939 (BR-5)	128
305-mm Howitzer M1940 (BR-18)	130
AFTIAIRCRAFT ARTILLERY	132
14.5-mm Heavy Antiaircraft Machine Gun ZFU-2 and ZFU-4	134
37-mm Automatic Antiaircraft Gun M1939	136
57-mm Antiaircraft Gun M1950	138

	Page
76-mm Antiaircraft Gun M1938	140
85-mm Antiaircraft Gun M1939	142
100-mm Antiaircraft Gun M1949	144
122-mm Antiaircraft Gun M1955	146
ROCKET LAUNCHERS	148
132-mm Rocket Launcher M13	150
150-mm Rocket Launcher BM14	152
200-mm Rocket Launcher	154
220-mm Rocket Launcher BM24	156
300-mm Rocket Launcher M31	158
TANKS	160
Characteristics of Tanks	162
T34/76 Medium Tank	170
T34/85 Medium Tank	172
T44 Medium Tank	174
T54 Medium Tank	176
JS-1 Heavy Tank	178
JS-2 Heavy Tank	180
JS-3 Heavy Tank	182

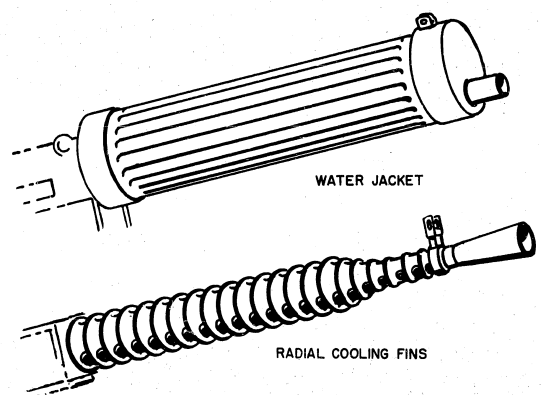
	Page
SELF-PROPELLED ARTILLERY . . . . .	.184
37-mm Antiaircraft Gun M1939 on SU-37. . . . .	.186
76-mm Self-Propelled Gun M1942/43 on SU-76 . . . . .	.188
85-mm Self-Propelled Gun M1943 (D5-S85 and D5-S85A) on SU-85 . . . . .	.190
100-mm Self-Propelled Gun M1944 (D10-S) on SU-100. . . . .	.192
122-mm Self-Propelled Gun M1944 (A19-S) on JSU-122 . . . . .	.194
122-mm Self-Propelled Gun M1943 (D25-S) on JSU-122 . . . . .	.196
152-mm Self-Propelled Gun Howitzer M1937 (ML-20S) on JSU-152 . . . . .	.198
ARMORED CARS AND PERSONNEL CARRIERS. . . . .	.200
BA-64 Armored Car. . . . .	.202
Armored Personnel Carrier BTR-40 . . . . .	.204
Armored Personnel Carrier BTR-152. . . . .	.206
AMPHIBIOUS VEHICLES. . . . .	.208
Amphibious Jeep. . . . .	.210
6x6 Wheeled Amphibian. . . . .	.212
Full Tracked Amphibious Cargo Vehicle. . . . .	.214
Amphibious Tank. . . . .	.216

	Page
TRANSPORTATION VEHICLES. . . . .	.218
Motorcycle M-72. . . . .	.220
Truck Cargo 4x2, GAZ-51. . . . .	.222
Truck Cargo 4x4, GAZ-63. . . . .	.224
Truck 4x4, GAZ-67B . . . . .	.226
Truck 4x4, GAZ-69. . . . .	.228
Truck Cargo, 4x2, ZIS-5. . . . .	.230
Truck Cargo, 4x2, ZIS-150. . . . .	.232
Truck Cargo, 6x6, ZIS-151. . . . .	.234
Truck Cargo, 4x2, MAZ-200. . . . .	.236
Truck YaAZ-210 Series (Cargo and Truck Tractor). . . . .	.238
PRIME MOVER. . . . .	.240
Prime Mover M-2. . . . .	.242
YA-14 Prime Mover. . . . .	.244
YA-12 and YA-13 Prime Mover. . . . .	.246
Tracked Prime Mover M1954. . . . .	.248
Full Tracked Prime Mover M1950 . . . . .	.250
GLOSSARY	
Recognition Features--ENGLISH, GERMAN, & RUSSIAN Vocabulary. . . . .	.252

SMALL ARMS

The Soviet Army of today is well equipped with modern small arms. In general, Soviet small arms are simple, rugged, and effective. Currently, standard weapons are well suited to mass production and to ease of handling and maintenance. Designed simply and often lacking close tolerances in their manufacture, they function well even under adverse conditions.

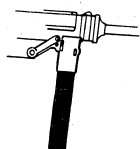
Many of the small arms now in service are those which were used during late World War II. Some of the older model weapons, such as the Maxim heavy machine gun M1910, in service throughout World War II, have since been eliminated. Other items, such as the 14.5-mm antitank rifles, are now considered ineffective against modern armor and have been withdrawn from service. In this connection, these older but still serviceable weapons are passed on to the Satellite forces.



WATER JACKET

RADIAL COOLING FINS

COOLING METHODS



BOX MAGAZINE



INTEGRAL BOX MAGAZINE



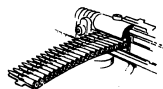
FABRIC OR METALLIC BELT



CURVED BOX MAGAZINE

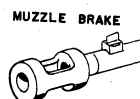


DRUM MAGAZINE

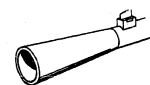


STRIP FEED

FEEDING METHODS



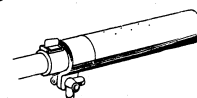
MUZZLE BRAKE



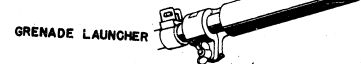
FLASH HIDER



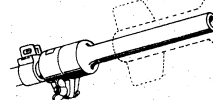
COMPENSATOR



SILENCER



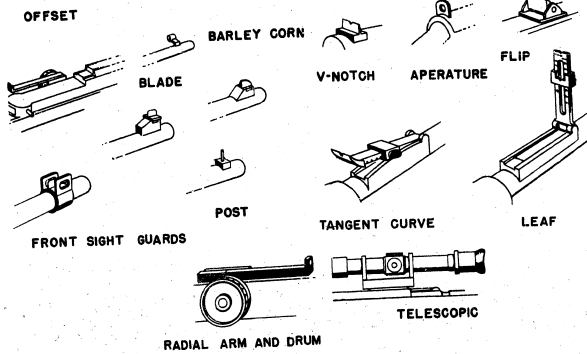
GRENADE LAUNCHER



SPIGOT TYPE GRENADE LAUNCHER

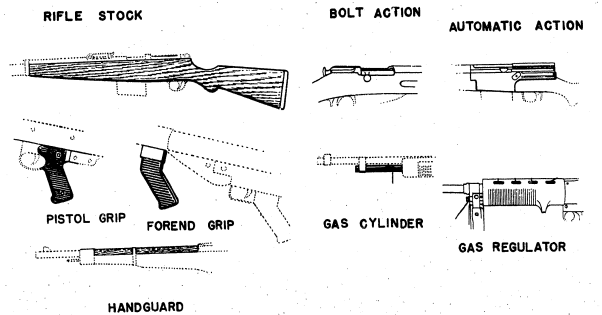
MUZZLE ATTACHMENTS

FRONT SIGHTS



SIGHTING DEVICES

REAR SIGHTS



GRIPS AND GUARDS

SYSTEMS OF OPERATIONS



7.62MM NAGANT REVOLVER M-1895

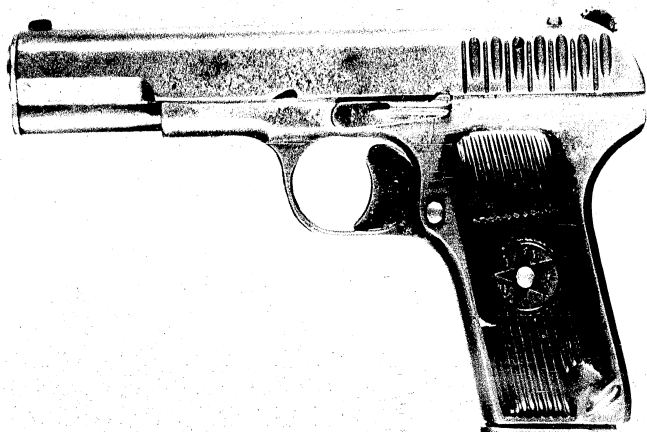
7.62-mm NAGANT REVOLVER M1895

This revolver was first adopted by the Russians in 1895. At present, this weapon is considered limited standard, and will be eventually replaced. It is usually double action, although some single action models were produced.

Loading is through a downward swinging loading gate on the right side of the frame. When the trigger is pulled and the hammer cocked, the cylinder moves slightly forward and the chamber, in line with the rear end of the barrel, is locked tightly against the rear end of the barrel insuring a gas-tight fit. The ammunition is easily recognized by the front end of the bullet which is sunk well below the mouth of the cartridge case.

CHARACTERISTICS

Caliber.....	7.62-mm
Ammunition.....	Soviet 7.62-mm "R" type
Operation.....	Double action
Cylinder capacity.....	7 rounds
Weight empty.....	3.65 pounds
Length.....	5.02 inches
Barrel length.....	4.3 inches
Muzzle velocity.....	892 feet per second
Effective range.....	55 yards



7.62MM TOKAREV PISTOL M-1933 (TT-33)

7.62-mm TOKAREV PISTOL M1933 (TT-33)

The standard Tokarev pistol is of a Colt-Browning design.

The Tokarev pistol is a .30 caliber, magazine fed, recoil operated, semiautomatic weapon. Its recognition features are the knurled external hammer, blade type front sight, and fan trigger. A half cock position of the hammer is the only safety device incorporated.

CHARACTERISTICS

Caliber.....	7.62-mm
Ammunition.....	M1930 "P"
Operation.....	Short recoil
Magazine capacity.....	8 rounds
Barrel length.....	4.57 inches
Overall length.....	7.68 inches
Weight empty.....	1.88 pounds
Front sight.....	Blade
Rear sight.....	"W" notch
Muzzle velocity.....	1,378 feet per second
Effective range.....	55 yards



9MM PISTOL MAKAROV (PM)

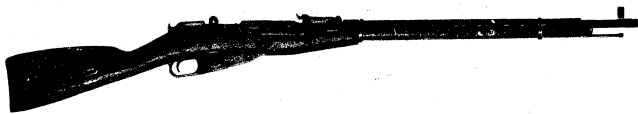
9-mm PISTOL MAKAROV (PM)

This is a blowback operated, semiautomatic pistol which appears to be much like the German Walther PPK and utilizes many of the design features of that weapon, among these are the double action trigger and the positive safety which is located on the left side of the slide. It is small, light weight, and ideally suited for its role as the official side arm of field grade and staff officers.

Recognition features are the external hammer, safety lever on the slide, very compact design, and the usual Soviet star on the one piece grip.

CHARACTERISTICS

Caliber.....	9-mm
Ammunition.....	9-mm pistol ball
Operation.....	Blowback
Magazine.....	Straight line box
Magazine capacity.....	8 rounds
Barrel length.....	5.85 inches
Overall length.....	6.34 inches
Weight with empty magazine.....	1 pound, 9 ounces
Effective range.....	50 yards
Front sights.....	Blade
Rear sights.....	Fixed "Y" notch



7.62 MM MOSSIN NAGANT RIFLE M1891/ 30

7.62-mm MOSSIN-NAGANT RIFLE M1891/30

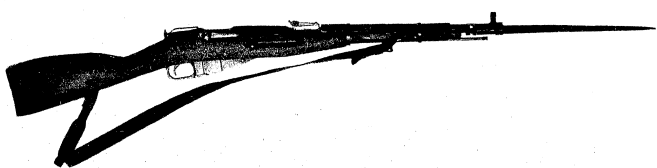
Several models of the 7.62-mm rifle, M1891/30 exist but all types are of the same basic design. The rifle is bolt operated, and loaded by a five-round clip.

At present it is used as a sniper's rifle, being fitted with a 3.5 or 4 power telescope and in some cases with a silencer.

It is recognized by its combination trigger guard and integral box magazine; its short, straight bolt handle; front sight guard; tangent curve rear sight graduated from 0-20 (0-2000 meters); angular bayonet (if fixed); sling slots in stock and flat barrel bands.

CHARACTERISTICS

Caliber.....	7.62-mm
Ammunition.....	M1908 "L"
Operation.....	Turning bolt
Magazine capacity.....	5 rounds
Barrel length.....	28.62 inches
Overall length.....	48.5 inches
Weight w/sling and telescope (unloaded).....	10.93 rounds
Muzzle velocity (w/M1908 light ball).....	2836 feet per second
Effective range	
w/telescope.....	280 yards
w/o telescope.....	440 yards



7.62 MM MOSSIN NAGANT CARBINE M1944

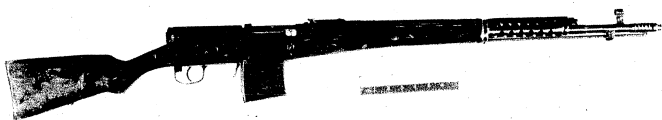
7.62-mm MOSSIN-NAGANT CARBINE M1944

Basically the same as the M1938 carbine except for the folding bayonet, this weapon has replaced the M1891/30 Mosin-Nagant Rifle as the standard infantry shoulder weapon. This weapon and bolt are placed on "safe" by closing the bolt and pulling the cocking piece to the rear and turning it to the left as far as it will go.

The recognition features are the permanently attached folding bayonet, tangent curve rear sight, combination trigger guard, and integral box magazine.

CHARACTERISTICS

Caliber.....	7.62-mm
Ammunition.....	M1908 "I"
Operation.....	Turning bolt
Magazine capacity.....	5 rounds
Barrel length.....	20.47 inches
Length w/bayonet folded.....	40.16 inches
Length w/bayonet extended.....	52.36 inches
Weight w/bayonet and sling (unloaded).....	8.6 pounds
Muzzle velocity (w/M1908 light ball).....	2690 feet per second
Effective range.....	440 yards



7.62MM TOKAREV SEMI-AUTOMATIC RIFLE M-1940

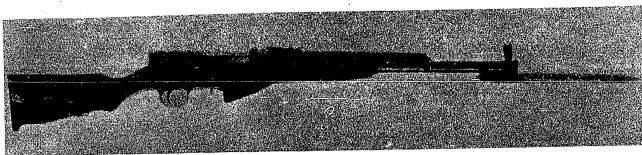
7.62-mm TOKAREV SEMIAUTOMATIC RIFLE M1940

The Model 1940 Tokarev is a gas operated, semiautomatic rifle. It may be loaded from strip-in clips through the top of the receiver, with an empty magazine in place, or by insertion of a loaded magazine into the bottom of the receiver. Manual safety is a swinging lever inside the trigger guard which can be pivoted in to block the rearward trigger movement.

There are two models in existence--the M1938 and M1940. They differ in stock design and in minor changes in the muzzle brakes and magazine catches. The Model 1940 is the one most commonly found in use, and is considered the production model. This weapon is regarded as being overcomplicated and subject to frequent malfunction.

CHARACTERISTICS

Caliber.....	7.62-mm
Ammunition.....	M1908 "L"
Operation.....	Gas operated
Magazine capacity.....	10-round box
Barrel length.....	24.5 inches
Length w/o bayonet.....	48.27 inches
Weight w/o bayonet.....	8.6 pounds
Muzzle velocity.....	2,756 feet per second
Effective range w/o telescope.....	440 yards



7.62 MM SEMI-AUTOMATIC CARBINE "SIMONOV" (SKS)

7.62-mm SEMIAUTOMATIC CARBINE SIMONOV (SKS)

A carbine by Soviet nomenclature but qualified as a rifle by US standards. It is air cooled, gas operated, and has a permanently attached, folding knife-type bayonet. Some older models, however, have a cruciform-type bayonet instead.

It is a well designed weapon and is replacing all other rifles and carbines in the Soviet Army.

It utilizes the Model 1943 short ammunition. It may be easily recognised by the triangular portion of the magazine which extends through the lower side of the stock just forward of the trigger guard.

CHARACTERISTICS

Caliber.....	7.62-mm
Ammunition.....	M1943 short
Operation.....	Gas, semiautomatic
Magazine.....	Staggered box type
Magazine capacity.....	10 rounds
Barrel length.....	20.47 inches
Length w/bayonet extended.....	49.6 inches
Length w/ bayonet folded.....	40.16 inches
Muzzle velocity.....	2,425 feet per second
Effective range.....	440 yards
Front sights.....	Post with circular guard
Rear sights.....	Tangent leaf



7.62MM SHPAGIN PPSH SUBMACHINE GUN MI941

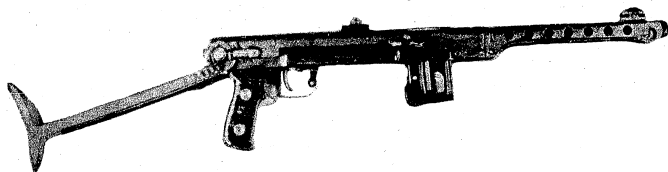
7.62-mm SHPAGIN PPSH SUBMACHINE GUN MI941

The 7.62-mm submachine gun, PPSH-41 (Shpagin), is a high cyclic rate weapon that can be fired either full or semiautomatic. The change lever for selecting the type of fire is located on the trigger guard; for automatic fire, it is pushed forward; and for semiautomatic fire, the lever is in the rear position.

The barrel jacket, which extends beyond the muzzle, acts as a muzzle brake and compensator. Recognition features are the wooden stock, drum-type or long curved box magazine (both of which are interchangeable), slotted barrel casing with diagonally cut end, and firing selector located within trigger guard.

CHARACTERISTICS

Caliber.....	7.62-mm
Ammunition.....	MI930 "P"
Operation.....	Blowback
Magazine.....	71-round drum or 35-round magazine
Cyclic rate of fire.....	700-900 rounds per minute
Practical rate of fire.....	100 rounds per minute
Type of fire.....	Selective
Barrel length.....	10.63 inches
Overall length.....	33.15 inches
Weight w/loaded magazine.....	11.99 pounds (9.26 pounds)
Weight w/o magazine.....	7.72 pounds
Muzzle velocity.....	1,640 feet per second
Effective range (short bursts).....	220 yards



7.62MM SUDAREV PPS-SUBMACHINE GUN-M-1943

7.62-mm SUDAREV PPS SUBMACHINE GUN M1943

The 7.62-mm submachine gun, PPS-1943, is of later design and manufacture than the PPSH-1941 submachine gun. The stock is hinged and folds up and forward when the stock release button is pressed, thus facilitating carrying. It is fully automatic in operation but the cyclic rate has been deliberately retarded to permit "touching off" of single rounds. A compensator is welded on the front of the barrel jacket. The gun fires from an open bolt and, with a loaded magazine in place, it is ready to fire.

CHARACTERISTICS

Caliber	7.62-mm
Ammunition	M1935 "p"
Operation	Blowback
Magazine	35 round box
Cyclic rate of fire	650 rounds per minute
Practical rate of fire	100 rounds per minute
Type of fire	Full Automatic
Barrel length	9.45 inches
Length w/stock extended	32.72 inches
Length w/stock folded	24.25 inches
Weight w/loaded magazine	7.98 lbs.
Weight w/o magazine	6.61 lbs.
Muzzle velocity	1640 feet per second
Effective range	
short bursts	220 yards, approx.
long bursts	110 yards, approx.



7.62MM SUB-MACHINE GUN "KALASHNIKOV" (AK)

7.62-mm SUBMACHINE GUN "KALASHNIKOV" (AK)

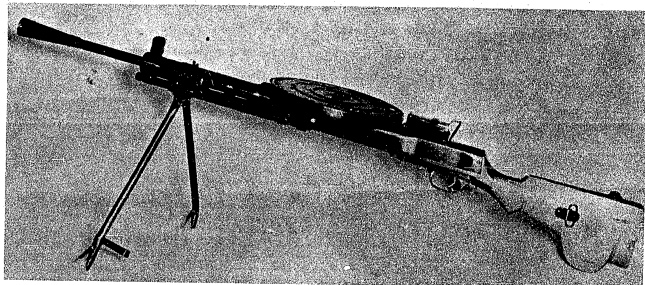
This weapon is designed to replace the long standard FPS and PPSH submachine gun in the Soviet Army. It is capable of both semiautomatic and full automatic fire and is gas operated and air cooled.

This is a much more refined weapon than either of its predecessors, having a completely machined receiver and having much better all around workmanship.

It fires the M1943 short ammunition and may be found with either a wooden stock or a folding metal stock.

CHARACTERISTICS

Caliber.....	7.62-mm
Ammunition.....	M-1943 short
Operation.....	Gas, full or semiautomatic
Magazine.....	Staggered box
Magazine capacity.....	30 rounds
Cyclic rate of fire.....	600 rounds per minute
Practical rate of fire.....	100 rounds per minute
Barrel length.....	16.3 inches
Overall length.....	34.5 inches
Weight w/empty magazine.....	9.37 pounds
Muzzle velocity.....	2,400 feet per second
Effective range.....	500 yards
Front sights.....	Hooded post
Rear sights.....	Tangent leaf



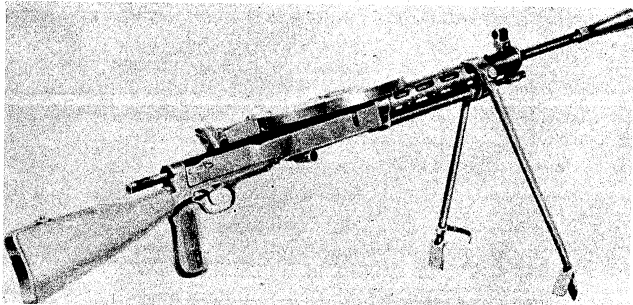
7.62MM DP LIGHT MACHINE GUN

7.62-mm DP LIGHT MACHINE GUN

The 7.62-mm light machine gun, DP "Degtyarev," is a gas operated, drum fed, air cooled, automatic fire weapon. It is the basic Soviet light machine gun, and the other models (DPM, DT, DTM, and M1946) are variations and improvements. The DP is simple in construction. It is used as the base of fire for the Soviet rifle squad, and it delivers only full automatic fire. The gas cylinder has three gas vents of different sizes to permit changing the rate of automatic fire. Recognition features are the drum magazine mounted on the top of the barrel, bipod, slotted barrel casing, gas cylinder underneath the barrel, wooden stock with cheek rest, and control flash hider.

CHARACTERISTICS

Caliber.....	7.62-mm
Ammunition.....	M1930 "D"
Operation.....	Gas
Magazine.....	47-round drum
Cyclic rate of fire.....	600 rounds per minute
Practical rate of fire.....	80 rounds per minute
Barrel length.....	23.5 inches
Length w/flash hider.....	50 inches
Weight w/loaded magazine.....	26.23 pounds
Weight w/bipod (w/o magazine).....	20.06 pounds
Muzzle velocity w/M1908 light ball.....	2,756 feet per second
Effective range.....	Up to 880 yards "Vs" group targets



7.62MM DPM LIGHT MACHINE GUN

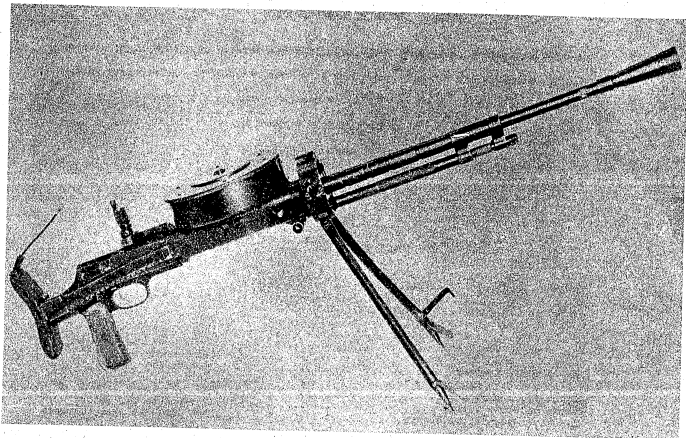
7.62-mm DPM LIGHT MACHINE GUN

The 7.62-mm light machine gun, DPM, is an improved version of the DP light machine gun. The operating spring has been relocated in a tube attached to the receiver back plate and a pistol grip has been added. The bipod is permanently affixed.

The safety is located on the right side of the receiver above the trigger. Recognition features are the operating spring housing projecting to the rear of the receiver, pistol grip, and permanently fixed bipod.

CHARACTERISTICS

Caliber	7.62-mm
Ammunition	M1930 "D"
Operation	Gas
Magazine	47 round drum
Cyclic rate of fire	600 rounds per minute
Practical rate of fire	80 rounds per minute
Barrel length	23.5 inches
Length w/flash hider	50 inches
Weight w/loaded magazine	26.9 pounds
Weight w/o magazine	20.72 lbs.
Muzzle velocity	2,756 feet per second
Effective range	880 yards Vs group targets



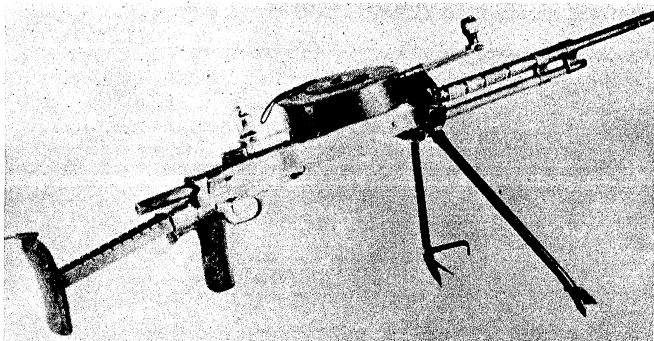
7.62MM DT TANK MACHINE GUN

7.62-mm DT TANK MACHINE GUN

The Degtyarev DT is a tank version of the DP infantry LMG with such modifications as are necessary for its use as a tank gun, i.e. increased magazine capacity, retractable shoulder stock, and the addition of a pistol grip. The DT is utilized in both fixed and flexible mountings, and each weapon is equipped with a bipod, for off-vehicle use.

CHARACTERISTICS

Caliber.....	7.62-mm
Ammunition.....	M1930 "D"
Operation.....	Gas
Magazine.....	60-round drum
Practical rate of fire.....	100 rounds per minute
Cyclic rate of fire.....	600 rounds per minute
Barrel length.....	23.5 inches
Length stock extended.....	46.5 inches
Weight w/loaded magazine.....	27.91 pounds
Weight w/o magazine or bipod.....	21.45 pounds
Muzzle velocity w/M1908 light ball.....	2,756 feet per second
Effective range.....	880 yards "Vs" halted vehicles



7.62MM LIGHT MACHINE GUN "DTM"

7.62-mm LIGHT MACHINE GUN DTM

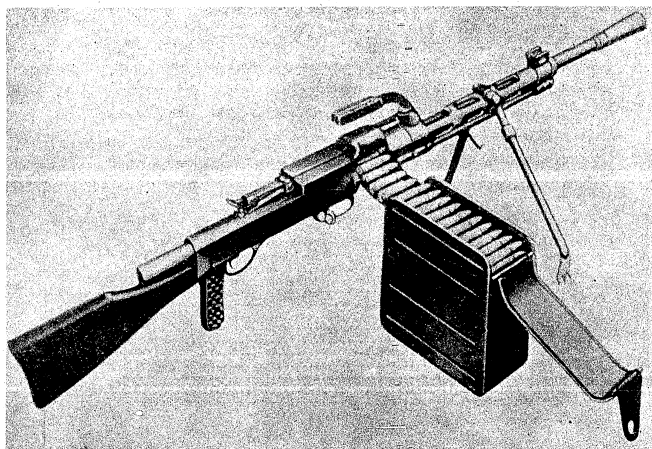
This piece is a modernized version of the Degtyarev DT. The change used to modernize the DT was relocating the operating spring behind the receiver rather than around the piston rod beneath the barrel.

This model is easily recognized by the housing because the spring extends approximately four to five inches over the retractable stock.

It is used interchangeably with the DT as a coaxial weapon and bow gun on Soviet tanks.

CHARACTERISTICS

Caliber.....	7.62-mm
Ammunition.....	Model 1930 D
Operation.....	Gas
Magazine.....	Double layer drum
Magazine capacity.....	60 rounds
Cyclic rate of fire.....	600 rounds per minute
Practical rate of fire.....	100 rounds per minute
Barrel length.....	23.5 inches
Overall length stock extended.....	46.46 inches
Overall length stock retracted.....	29.76 inches
Weight w/o magazine.....	22 pounds
Weight w/loaded magazine.....	28.46 pounds
Muzzle velocity.....	2,756 feet per second
Effective range.....	880 yards



7.62MM LIGHT MACHINE GUN M-1946

7.62-mm COMPANY MACHINE GUN M1946 (RP-46)

This is a further development of the 7.62-mm "Degtyarev" Dr. It features a detachable, belt fed mechanism that permits the use of a metallic link belt holding fifty rounds, in addition to the forty-seven round drum magazine used on the DP light machine gun. Multiples of fifty rounds may be linked together to give a longer period of fire. This metallic link belt is the same as that used with the 1943 "Goryunov" heavy machine gun. In addition, the weapon employs a much heavier barrel. This weapon was developed in order to increase the practical rate of fire in a weapon of light weight.

CHARACTERISTICS

Caliber.....	7.62-mm
Ammunition.....	M1908 "L" and M1950 "D"
Operation.....	Gas
Methods of feeding.....	47-round drum or metallic link belt
Cyclic rate of fire.....	Unknown
Practical rate of fire.....	80 rounds w/drum 250 rounds w/belt
Type of fire.....	Full automatic
Barrel length.....	Unknown
Overall length.....	50 inches (estimated)
Weight w/bipod.....	28.66 pounds
Muzzle velocity.....	2,756 feet per second
Effective range.....	Up to 880 yards "Ve" group targets



7.62MM LIGHT MACHINE GUN RPD

7.62-mm LIGHT MACHINE GUN RPD

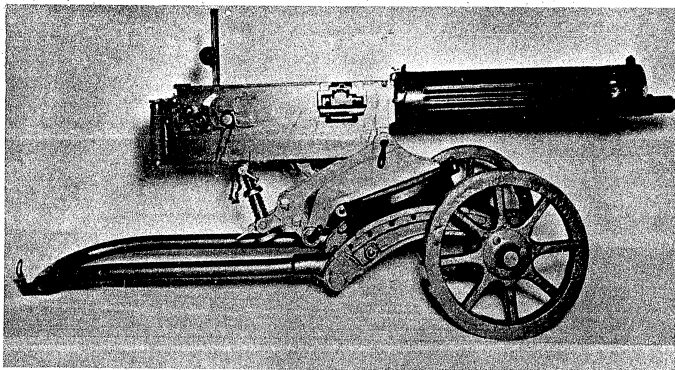
It is gas operated, air cooled, and designed to be shoulder fired with the aid of a permanently attached bipod.

The ammunition is fed into the weapon in a standard nondisintegrating metallic link belt which is housed in a drum beneath the receiver. This drum appears to be similar to the drum utilized on many submachine guns.

The piece is capable of full automatic fire only, and features a chrome plated barrel for longer life.

CHARACTERISTICS

Caliber.....	7.62-mm
Ammunition.....	M1943 short
Operation.....	Gas
Magazine.....	100-round belt in drum
Practical rate of fire.....	150 rounds per minute
Barrel length.....	30.25 inches
Overall length.....	40.75 inches
Weight w/o magazine.....	14 pounds, 8 ounces
Muzzle velocity.....	2,625 feet per second
Effective range.....	800 yards
Front sights.....	Post with circular guard
Rear sights.....	Tangent leaf



7.62MM MAXIM HEAVY MACHINE GUN M-1910

7.62-mm MAXIM HEAVY MACHINE GUN M1910

This weapon has been almost completely replaced by the Goryunov M1943 heavy machine gun. However, it is still in use in some of the Satellite armies.

The recognition features are the water cooling jacket, two-wheeled mount, and rear grips. A shield is sometimes attached to this weapon. Two type of mounts may be used--a rather heavy two-wheeled mount called the Sokolov or a two-wheeled dual purpose mount which can be used to deliver ground or antiaircraft fire.

CHARACTERISTICS

Caliber.....	7.62-mm
Ammunition.....	M1930 D
Operation.....	Short recoil
Feeding device.....	250-round belt
Cyclic rate of fire.....	500-600 rounds per minute
Practical rate of fire.....	250-300 rounds per minute
Barrel length.....	28.4 inches
Overall length (gun only).....	43.6 inches
Weight w/mount and w/o ammunition.....	52.18 pounds
Weight (gun only w/coolant).....	52.47 pounds
Cooling system.....	Water
Muzzle velocity w/M1930 heavy ball.....	2,625 feet per second
Effective range	
Ground targets.....	1,100 yards
Air targets.....	1,500 feet



7.62MM GORYUNOV HEAVY MACHINE GUN M-1943

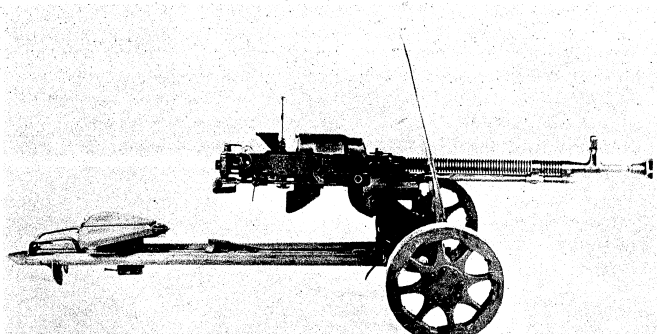
7.62-mm GORYUNOV HEAVY MACHINE GUN M1943

This SG M1943 machine gun began to appear in limited numbers at the end of World War II. It uses a light wheeled mount which is easily converted to antiaircraft use by mounting the gun on the spade end of the trail leg. The trail leg is jointed to reduce overall length when the gun is used in confined spaces such as trenches. Five multiples of the fifty-round metallic link belt can be joined to give a two hundred and fifty-round capacity belt. In addition, the two hundred and fifty-round canvas belt of the M1910 Maxim can be used with this gun.

Its recognition features are its two wheeled universal mount, carrying handle, spade type rear grips, gas cylinder under barrel, and trumpet type flash hider.

CHARACTERISTICS

Caliber.....	7.62-mm
Ammunition.....	M1930 D
Operation.....	Gas
Feeding device.....	50-round metallic link or 250-round fabric belt
Cyclic rate of fire.....	600-700 rounds per minute
Practical rate of fire.....	300-350 rounds per minute
Barrel length.....	28.4 inches
Overall length (gun only).....	45.28 inches
Weight (gun only).....	30.42 pounds
Weight of gun w/tripod.....	89 pounds
Effective range	
Ground targets.....	1,100 yards
Antiaircraft targets.....	1,650 feet



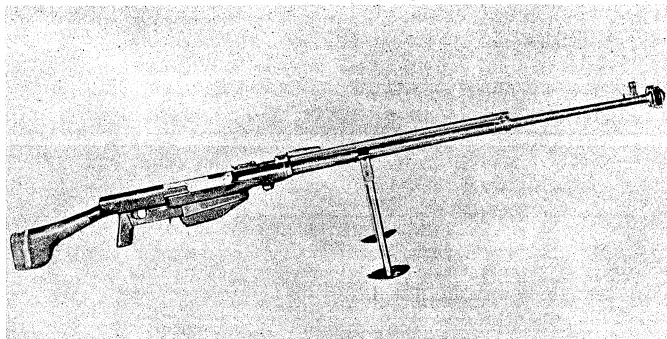
12.7MM HEAVY MACHINE GUN DSHK MI938

12.7-mm HEAVY MACHINE GUN DSHK MI938

The 12.7-mm DShK (Degtyarev Shpagin), heavy caliber machine gun of the Soviet Army, is used primarily as an antiaircraft gun for light antiaircraft defense, and on armored vehicles. Its combination mount is used for either antiaircraft or ground fire. For antiaircraft fire, the wheels and shield are removed, and the legs extended to form a shoulder high tripod. For ground fire, its three legs fold together to form a trail, and the two wheels and a shield are fitted to it. The Soviet Navy uses this gun as a light antiaircraft weapon. It is also mounted on tanks and self-propelled guns as a defensive and antiaircraft weapon. An earlier version of this weapon, the DK1934 is now obsolete.

CHARACTERISTICS

Caliber.....	12.7-mm
Operation.....	Gas
Practical rate of fire.....	125 rounds per minute
Cyclic rate of fire.....	550-600 rounds per minute
Feeding device.....	Metallic link belt
Barrel length.....	39.4 inches
Overall length (gun only).....	62.74 inches
Weight of gun (gun only).....	74.96 pounds
Weight of gun, tripod, and shield	
w/50 rounds ammunition.....	393.19 pounds
Muzzle velocity w/armor piercing.....	2,822 feet per second
Effective range	
Ground targets.....	3,300 yards
Antiaircraft targets.....	Estimated 3,000 feet



14.5MM SIMINOV PTRS ANTI-TANK RIFLE MI941

14.5-mm SIMONOV PTRS ANTI-TANK RIFLE MI941

Like the single shot PTRD Antitank Rifle MI941, the PTRS is relatively ineffective against medium and heavy tanks, and is obsolete in the Soviet Army but has been encountered in some of the Satellites.

It is a two man, gas operated, air cooled, magazine fed, semiautomatic, bipod mounted antitank rifle.

Its recognition features are its long length, muzzle brake, carrying handle on left side, pistol grip, and wooden stock which usually has rubber padding on the end.

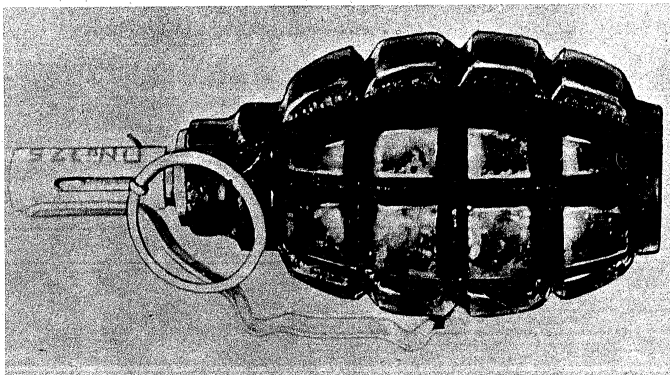
CHARACTERISTICS

Caliber.....	14.5-mm
Operation.....	Gas
Type of fire.....	Semiautomatic
Feeding device.....	5-round magazine
Overall length.....	64.25 inches
Weight w/bipod.....	46.08 pounds
Rate of fire.....	15 rounds per minute
Muzzle velocity (w/SS41 API).....	3,261 feet per second

GRENADES

Soviet hand grenades range from offensive, combination offensive-defensive, and defensive grenades to shaped-charge antitank and chemical grenades. Their relative cheapness, ease, and speed of production have made them extremely popular with the Soviets. Hand antitank grenades, especially of the shaped-charge design, are emphasized. New HE and HEAT rifle grenades may be expected. It is believed that Soviet emphasis on the combat value and effectiveness of grenade warfare will dictate further development of shaped-charge antitank weapons.

Detailed descriptions of grenades in use are presented on the following pages.



F-1 DEFENSIVE HAND GRENADE

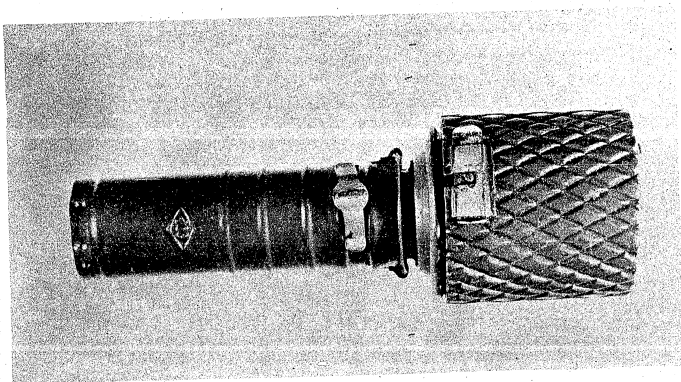
F-1 DEFENSIVE HAND GRENADE

This grenade is similar in appearance, and functions the same as, the U.S. Mk II. The body is of serrated cast iron construction and is usually painted olive drab.

To use, grasp the safety lever and grenade body with one hand and remove the safety pin and ring with the other hand. When the grenade is thrown, the safety lever pivots upward and over the grenade body and releases the spring loaded firing pin, which actuates the delay element.

CHARACTERISTICS

Type.....	Defensive fragmentation
Use.....	Against personnel
Weight.....	1.54 pounds
Overall length.....	4.87 inches
Diameter.....	2.16 inches
Delay time.....	3.2 to 4.5 inches



RGD-33 OFFENSIVE/DEFENSIVE HAND GRENADE

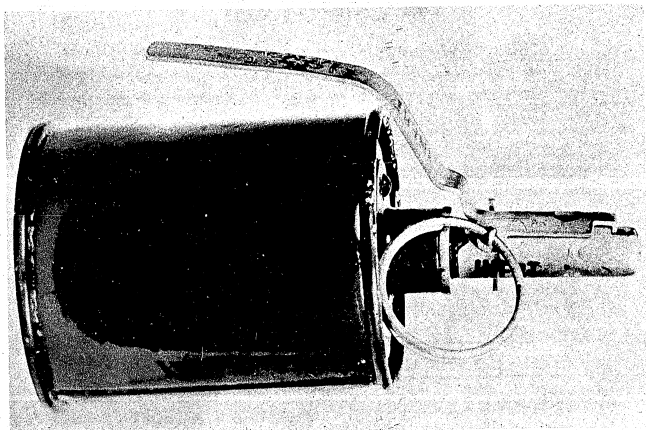
RGD-33 OFFENSIVE/DEFENSIVE HAND GRENADE

The RGD-33 is a dual purpose grenade. As an offensive grenade, it has a 5.5 yard lethal radius. By adding a fragmentation sleeve, it becomes a defensive grenade with a 27 yard lethal radius. This sheet metal grenade is normally painted olive brown.

The grenade is thrown vigorously. A spring in the handle forces the body back quickly and the firing pin strikes the primer actuating the delay element. Duds are dangerous and should be destroyed in place as the slightest vibration may set them off.

CHARACTERISTICS

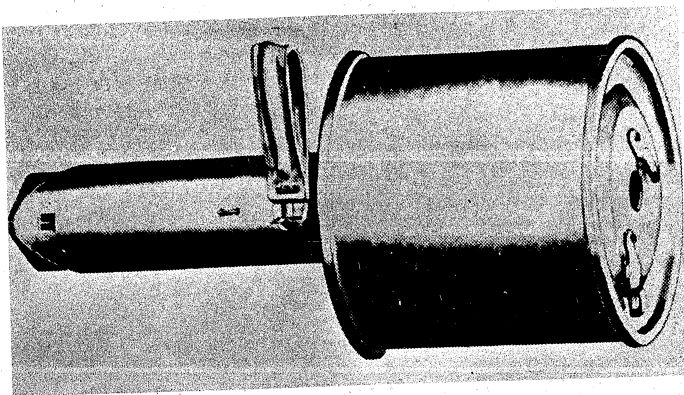
	Fragmentation Sleeve	
	WITH	WITHOUT
Weight.....	22 - 26 oz.	17.5 oz.
Overall length.....	7.48 inches	7.48 inches
Diameter.....	2.05 inches	1.7 inches
Maximum radius.....	27 yards	5.5 yards
Delay time.....	3.2 - 3.8 seconds	3.2 - 3.8 seconds

**RG-42 OFFENSIVE HAND GRENADE****RG-42 OFFENSIVE HAND GRENADE**

This grenade is a sheet metal cylinder, filled with 3.9 ounces of TNT. The safety ring, lever, and cotter pin closely resemble those of the U.S. Mk II fragmentation grenade. To use this grenade, hold in palm of throwing hand with safety lever against palm, and with other hand pull safety ring and pin from fuse and throw grenade. As grenade leaves hand the safety lever pivots upward and over the grenade body, allowing the firing pin to ignite the delay element.

CHARACTERISTICS

Type.....	offensive
Use.....	anti-personnel
Weight, fused.....	14.15 oz.
Overall length.....	5.0 inches
Diameter.....	2.13 inches
Fuse delay time.....	3.2 - 4.5 seconds
Effective radius.....	16 - 22 yards



RPG-40 HAND GRENADE

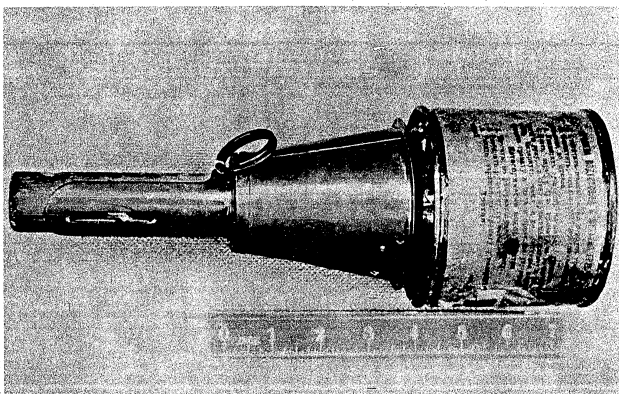
RPG-40 HAND GRENADE

This grenade is primarily used against lightly armored vehicles. It is constructed of sheet metal and is filled with TNT. The primer-detonator is inserted into the grenade head just prior to throwing. The firing mechanism is contained in the handle which screws into the head. When the safety pin is pulled and the lever on the handle is released, the grenade is armed.

Under no circumstances should dud grenades of this type be picked up, as the fuse is armed and the slightest vibration will set it off.

CHARACTERISTICS

Type.....	offensive
Principle use.....	Antitank defense
Weight.....	42.5 oz.
Overall length.....	7.87 inches
Diameter.....	3.74 inches
Effective radius, personnel.....	22 yards
Fuse.....	Impact/instantaneous



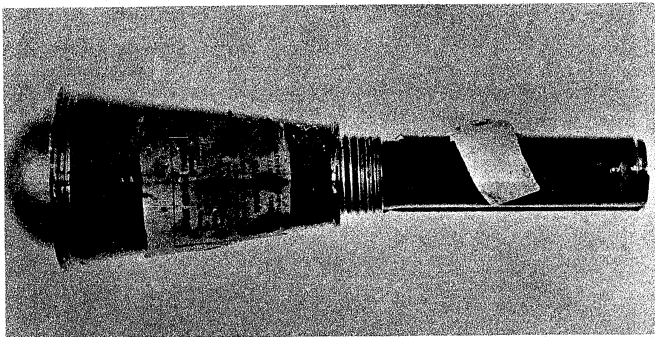
RPG-43 HAND GRENADE

RPG-43 HAND GRENADE

Of novel design, the RPG-43 is a close combat AT grenade consisting of a cylindrical sheet-metal head, to which is threaded a wooden handle with a sheet metal safety lever. A sliding conical sleeve, open at both ends, is connected to the handle by two fabric strips and held against base of grenade by the safety pin. To arm grenade, insert detonator in head and pull safety pin. As grenade is thrown, releasing the safety lever allows the conical sleeve to slide off rear end of handle, and trail behind grenade in flight thus stabilizing grenade. An instantaneous base fuze detonates the grenade on impact.

CHARACTERISTICS

Type.....	H.E.A.T.
Use.....	Antitank
Weight, fused.....	42.5 oz.
Overall length.....	11.78 inches
Diameter.....	5.72 inches
Fuze.....	Impact/instantaneous
Armor penetration.....	2.95 inches
Bursting radius fragmentation.....	22 yards



RPG-6 HAND GRENADE

RPG-6 HAND GRENADE

The RPG shaped charge hand grenade is designed primarily for antitank use, also because of its secondary fragmentation effect, it can be used as an antipersonnel weapon. For this reason it should always be thrown from cover.

To use this grenade, the handle and safety lever are firmly grasped in one hand while the safety pin is withdrawn. When the grenade is thrown, the lever flies off and a stabilizing device consisting of a weight and four canvas streamers is exposed. Grenade explodes on impact.

CHARACTERISTICS

Type.....	HEAT
Use.....	Against armor & pillboxes
Weight, fused.....	36 oz.
Overall length.....	15.5 inches
Diameter.....	4 inches
Fuse.....	Impact/instantaneous
Radius of fragmentation.....	22 yards
Armor penetration.....	3.94 inches

ROCKET AND RECOILLESS ANTITANK WEAPONS

Although the Soviets field tested a recoilless gun in the Russo-Finnish War of 1939/40, they did not employ any of their own recoilless weapons in World War II. Lend-lease bazookas, German rocket launchers, and Panzerfausts were all, however, employed.

The post-war Soviet Army now has a family of infantry antitank weapons based on German and United States designs. For the squad weapon they have developed an improved German Panzerfaust, while for the larger recoilless weapons the United States recoilless rifles have served as models.



INFANTRY ANTI-TANK LAUNCHER "RPG-2"

INFANTRY ANTITANK LAUNCHER RPG-2

The RPG-2 is patterned after the German World War II Panzerfaust, and is a very light, portable effective antitank weapon.

Although very light in weight, it is capable of great armor penetration and by its use one man may easily knock out a tank.

Unlike the German weapon, it may be reloaded and fired as many times as needed.

It may be recognized by its small wooden shielded, stove-like tube, with a projectile head much larger than the body of the weapon itself, projecting from the front.

CHARACTERISTICS

Caliber of tube.....	40-mm
Caliber of projectile.....	62-mm
Method of operation.....	Rocket
Method of loading.....	Hand loads into muzzle
Length without projectile.....	47 inches
Weight of weapon.....	15 pounds
Weight of projectile.....	2 pounds, 9 ounces
Muzzle velocity.....	2,500 feet per second
Effective range.....	150 yards
Penetration.....	8 to 9 inches



82 MM RECOILLESS ANTITANK GUN

82-mm RECOILLESS ANTITANK GUN

This weapon is in many ways a smaller edition of the 107-mm recoilless antitank gun.

This piece is hand-towed, muzzle first, on a light wheeled carriage, much in the manner of the Soviet 82-mm mortar. In firing position the folding tripod is swung into position to support the gun.

CHARACTERISTICS

Caliber.....	82-mm
Method of operation.....	Recoilless
Length of tube.....	6 feet
Weight.....	125 pounds
Muzzle velocity.....	1,000 feet per second
Effective range.....	1,000 yards
Penetration.....	9 to 10 inches



107MM RECOILLESS ANTI-TANK GUN

107-mm RECOILLESS ANTI-TANK GUN

This is the heaviest recoilless type antitank weapon available to the Soviet forces. It is in many ways similar to the US 106-mm recoilless rifle.

Its carriage is wheeled, however, the wheels are removed and the carriage becomes a tripod when it is in firing position.

It operates on a recoilless principle having an open type swinging breechblock.

It is recognizable by its odd carriage with the forward leg of the tripod fastened just beneath the tube when in traveling position and the fixed tubular trails in the rear. The breech is enlarged and in some instances covered with a grill or jacket to protect the crew from the hot chamber.

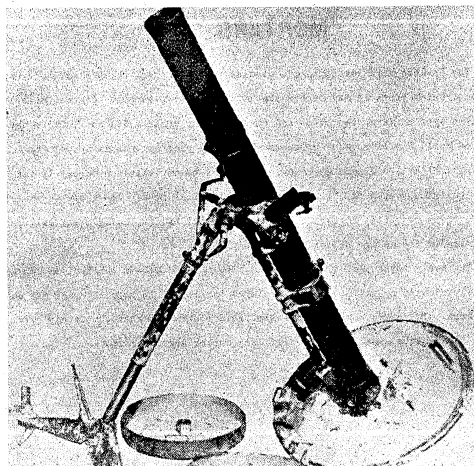
CHARACTERISTICS

Caliber.....	107-mm
Method of operation.....	Recoilless
Length of tube.....	10 feet
Weight.....	750 pounds
Muzzle velocity.....	1,200 feet per second
Effective range.....	1,500 yards
Maximum range.....	7,500 yards
Penetration.....	10 inches

MORTARS

The Soviets have developed and used several different calibers of mortars, three of which properly may be considered as infantry weapons. Of the three infantry type mortars, the 37-mm and 50-mm company mortars did not survive the test of World War II because of their very short ranges, unsatisfactory fragmentation effect, and poor accuracy. Thus, the 82-mm battalion mortar is the only remaining weapon in this category that is still used. There are two models of the 82-mm battalion mortars now in service, all ballistically identical, but differing in the design of mount and base plate.

The heavy mortars of 107-mm, 120-mm, 160-mm, and 240-mm caliber, though not actually classed as artillery, are employed tactically in much the same way as howitzers. The heavy mortars, like the field rocket launchers, were employed as an inexpensive substitute for artillery during World War II.



82MM MORTAR M1941

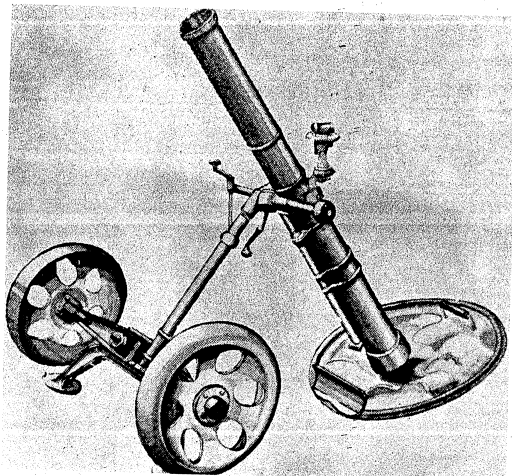
82-mm MORTAR M1941

A simplified mortar having an ingenious mount that permits quick attachment of wheels for rapid displacement over relatively even ground. One man is capable of pulling this mortar.

When placing this weapon in the firing position, the bipod legs are unfolded and the wheels are removed.

CHARACTERISTICS

Caliber.....	82-mm
Weight in firing position.....	114.64 pounds
Muzzle velocity.....	692 feet per second (maximum elevation)
Range.....	3,326 yards
Elevation.....	+45 to +85 degrees
Traverse.....	5 degrees (at 45 degrees elevation)
Rate of fire.....	Up to 25 rounds per minute
Tube length.....	48 inches
Weight of projectile.....	7 pounds, 3 ounces

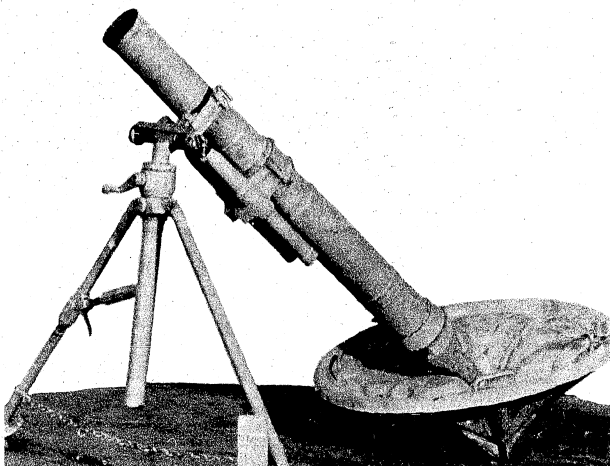
**82MM MORTAR M1943****82-mm MORTAR M1943**

The Soviet 82-mm M1943 mortar is similar to the design of the M1941, except that the bipod legs do not fold and the wheels are not removable. The wheels permit the mortar to be pulled over relatively even ground by one man, and are raised from the ground when the mortar is placed in the firing position. For manhandling or pack transport, this mortar breaks down into three loads to be carried by three men or one animal.

It is the standard mortar in the Soviet Army with the M1941 being modified to M1943. It is smooth bore, muzzle loading weapon which uses simple mechanical azimuth sights with front and rear sights like those of a rifle.

CHARACTERISTICS

Caliber.....	82-mm
Length of tube.....	48 inches
Weight in firing position.....	127.6 pounds
Weight of projectile.....	7.3 pounds
Muzzle velocity.....	692 feet per second
	Maximum elevation
Range.....	3,326 yards
Elevation.....	+45 to +85 degrees
Traverse.....	5 degrees (45 degree elevation)
Rate of fire.....	Up to 55 rounds per minute



120MM MORTAR MI938

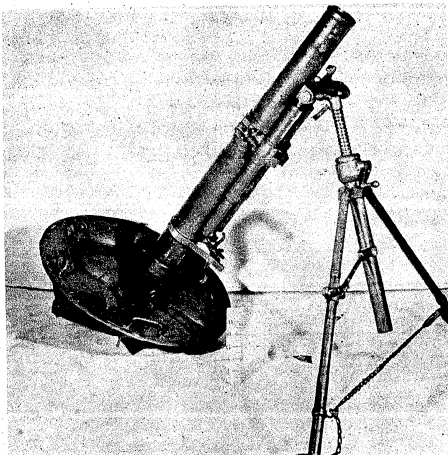
120-mm Mortar MI938

The 120-mm Mortar MI938 represents a highly creditable Soviet achievement in originality and practicality of design. The easily attached transport limber and the weight saved in the design of the circular, stamped baseplate make this 120-mm Mortar highly mobile despite its size. It is usually towed behind a truck which carries the ammunition, but a caisson is available when animal draft is necessary. For pack transport, it breaks down into three loads.

The 120-mm Mortar MI938 includes provision for trigger firing as well as the more usual drop-firing method.

CHARACTERISTICS

Caliber.....	120-mm
Weight in firing position.....	606 lbs.
Length of tube.....	75 inches
Weight w/ammunition.....	1058 lbs.
Weight of projectile (HE).....	35.05 lbs.
Muzzle velocity.....	892 feet per second
Range.....	6,236 yards
Elevation.....	45 to +80 degrees
Traverse.....	3 degrees (w/o moving bigod)
Rate of fire.....	1 up to 15 rounds per minute



120MM MORTAR M-1943

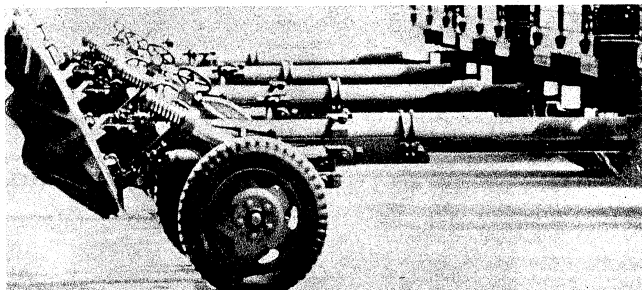
120-mm Mortar M1943

The 120-mm Mortar M1943 differs from the M1938 only in minor details. Ballistic characteristics and ammunition are identical. Both weapons have a short base cap (breach) and the same provision for trigger or drop-firing.

The M1943 is distinguished from the M1938 by the much greater length of the shock absorber cylinders.

CHARACTERISTICS

Caliber.....	120-mm
Weight in firing position.....	606 lbs.
Weight w/oalison.....	1200 lbs.
Weight of HE projectile.....	35.05 lbs.
Length of tube.....	73 inches
Muzzle velocity.....	692 feet per second
Range.....	6,236 yards
Elevation.....	+45 to +80 degrees
Traverse.....	3 degrees (w/o moving bipod)
Rate of fire.....	up to 15 rounds per minute



160MM MORTAR M-1943

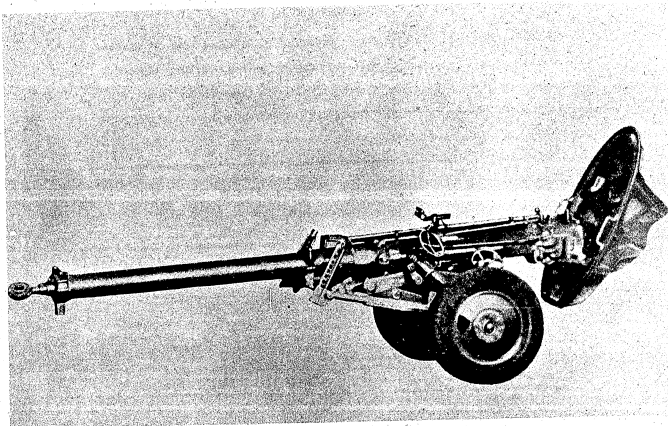
160-mm MORTAR M1943

The 160-mm mortar provides an important source of firepower for the Soviet rifle division. It is employed in much the same way as the U.S. Army employs howitzers of similar caliber, even though its range is considerably less. The mortar has a two wheeled carriage, which may be towed behind a truck.

Recognition features are the straight front edge on base plate; large spring and cylinder on right side of tube just above wheel; elevating and traversing hand wheels; recoil mechanism under barrel; towed by barrel using a muzzle adapter. On the carriage, the base plate extends considerably behind the wheels.

CHARACTERISTICS

Caliber.....	160-mm
Weight in firing position.....	2,761 pounds
Range.....	3,468 yards
Elevation.....	+45 to +85 degrees
Rate of fire.....	3 rounds per minute
Weight in traveling position.....	2,480 pounds
Weight of HE projectile.....	88.18 pounds
Length of tube.....	10.75 inches
Prime mover.....	ZIS-151 truck
Diameter of base plate.....	5.25 feet



160MM MORTAR M-1953

160 MORTAR, M1953

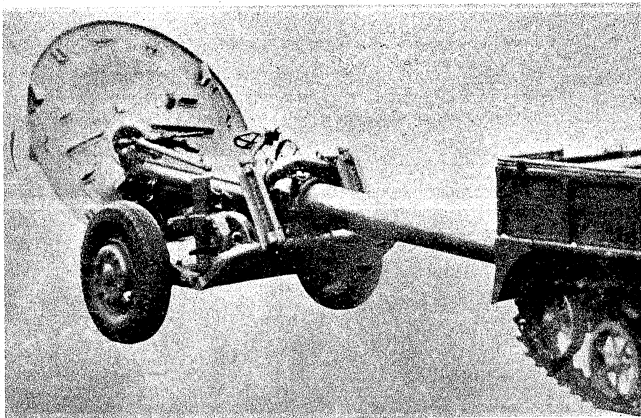
This mortar first appeared in 1953 and apparently is a revision of the model 1943 mortar of this caliber. It is probably designed to replace this piece. The new weapon has a longer tube and an improved base plate.

To load, the tube breaks near the base plate and the round is inserted through the open breech. It is then trigger fired.

Recognition features of this mortar are the pickets on either side of the tube and the round base plate.

CHARACTERISTICS

Caliber.....	160-mm
Weight.....	3,300 pounds
Range.....	8,000 yards
Rate of fire.....	3 rounds per minute
Length of tube.....	13.5 feet
Diameter of base plate.....	5.25 feet



240MM MORTAR M1953

240-mm MORTAR M1953

This is the largest of the Soviet mortars. It is an extremely heavy mortar and fires an extremely heavy projectile. It is, of course, employed in the same role as the medium artillery is employed in the U.S. It is loaded and fired in the same manner as the 160-mm mortars.

It is recognizable by its very large size, extremely large base plate, firing platform underneath the tube, small vertical cylinders on either side of the tube just above the axle, and collar or yolk around the tube in which the trunnions are located.

CHARACTERISTICS

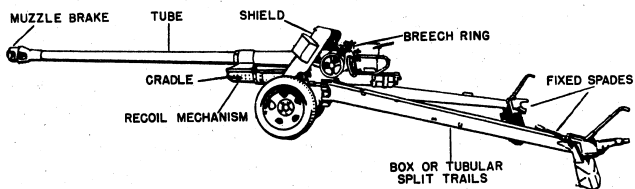
Caliber.....	240-mm
Weight.....	5,500 pounds
Range.....	12,000 yards
Rate of fire.....	2 rounds per minute
Weight of projectile.....	230 pounds
Length of tube.....	18 feet
Diameter of base plate.....	8 feet

ARTILLERY

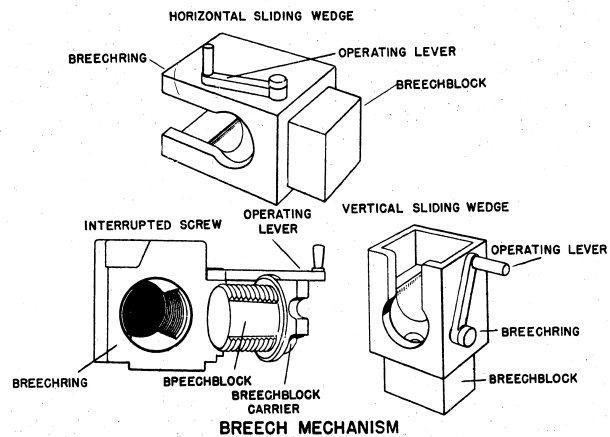
By tradition the Soviet Army favors artillery and have devoted great efforts to perfecting artillery designs. Many of the artillery pieces currently in use were developed just before and during World War II, however, within recent years a whole new family of artillery pieces have appeared and are gradually replacing the older designs in the field. Efforts at standardization of carriages and ammunition and increased mobility have characterized recent Soviet artillery design.

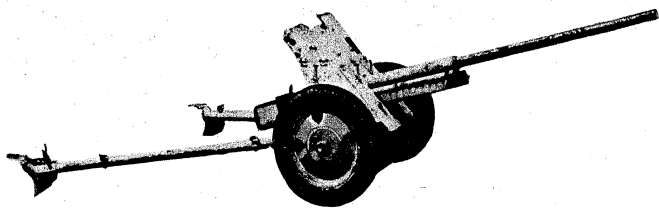
Furthermore, it is Soviet policy to make all artillery suitable for antitank roles through the use of armor-piercing ammunition. However, to neutralize the effectiveness of medium and heavy armor, antitank guns from 45-mm to 100-mm were developed. The development of the 100-mm antitank gun culminated the search for a mobile, high velocity, large caliber antitank gun.

A serious weakness of Soviet artillery is the lack of modern fire control. To overcome this weakness, Soviet doctrine advocates the employment of massed fires from large numbers of closely spaced artillery pieces. Because of the inadequacy of fire control, the Soviets have recognized their deficiencies in fire control and are striving to overcome them.



ANTITANK ARTILLERY





45MM GUN M1942

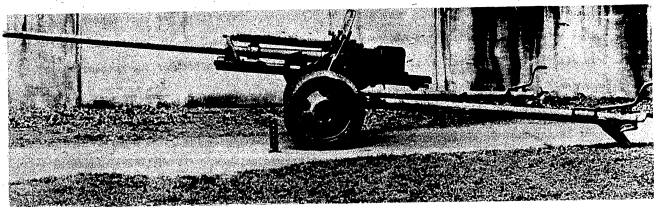
45-mm ANTITANK GUN M1942

With the same basic carriage as the M1937, this piece differs from its predecessor in outward appearance only in that the tube is approximately fifty per cent longer, and that it uses plain or slotted disc wheels instead of the spoked type. The breech ring is somewhat enlarged and strengthened so as to withstand the effect of the increased powder charge and to help balance the longer tube.

Few guns of this model were manufactured, as it was a stopgap weapon introduced in the latter half of World War II pending quantity production of the 57-mm gun, M1943. It is being replaced by more modern weapons of larger caliber. It will be encountered in Satellite armies.

CHARACTERISTICS

Caliber.....	45-mm
Muzzle velocity.....	3,510 feet per second w/HVAP
Range.....	5,468 yards
Length of tube.....	116.8 inches (66 calibers)
Weight in firing position.....	1,257 pounds
Weight of HVAP projectile.....	1.88 pounds
Rate of fire.....	30 rounds per minute
Elevation.....	-6 to +35 degrees
Traverse.....	60 degrees
Armor penetration.....	2.6 inches at 550 yards



57MM GUN M1943

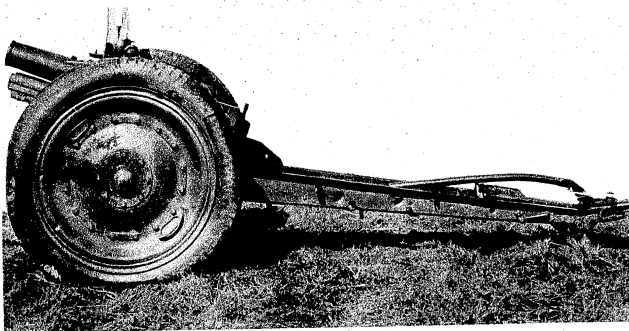
57-mm ANTITANK GUN M1943 (ZIS-2)

This piece is comparable to the U.S. 57-mm M-1 but having a noticeably longer tube. It uses the same carriage as the 76-mm gun M1942 and can be distinguished from the latter only by its somewhat longer and smaller caliber tube and the absence of a muzzle brake.

This model is a minor development of the M1941 57-mm, the main difference being that the latter had box-type trails instead of the tubular type.

CHARACTERISTICS

Caliber.....	57-mm (2.24 in.)
Muzzle velocity.....	4167 f.p.s.
Range.....	9,200 yards
Length of tube.....	154.6 inches
Weight in firing position.....	2,535 lbs.
Rate of fire.....	25 rounds per minute
Elevation.....	-5 to +25 degrees
Traverse.....	56 degrees
Armor penetration.....	5.6 inches at 550 yards
Weight of HVAP projectile.....	3.88 lbs.



76MM GUN (HOWITZER) M1927

76-mm REGIMENTAL GUN (HOWITZER) M1927

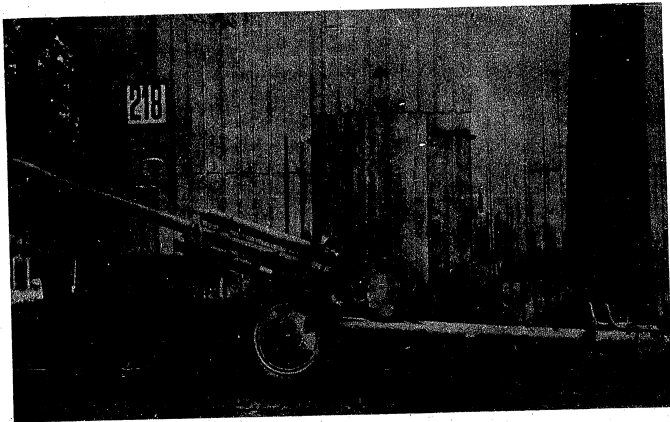
This weapon, actually a howitzer, was formerly the basic infantry support piece of the Soviet Army. Partly replaced by the 76-mm gun (howitzer) M1943, it has since been superseded in the rifle division by assault guns.

The piece is of simple, rugged construction. Its unusual feature is the very large wheels, which appear to be out of proportion to the rest of the weapon. These wheels are either steel disc, with run-flat tires having a sponge rubber filling, or, in the case of the version intended for animal draft, wooden wheels with steel or solid rubber tires.

This piece is still seen occasionally. It is probably used as a salute weapon.

CHARACTERISTICS

Caliber.....	76.2-mm (3 inches)
Muzzle velocity.....	1,270 feet per second
Range.....	9,272 yards
Length of tube.....	46.5 inches
Weight in firing position.....	1,720 pounds
Weight of HE projectile.....	13.7 pounds
Rate of fire.....	14 rounds per minute
Elevation.....	-6 to +25 degrees
Traverse.....	6 degrees



76MM GUN M-1942 (ZIS-3)

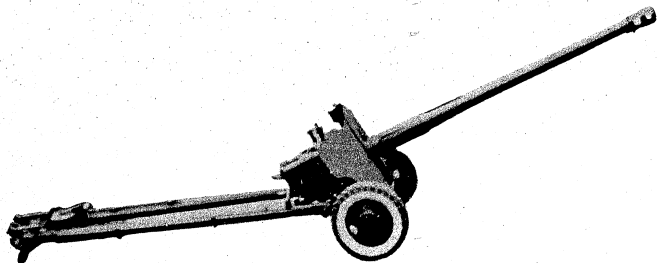
76-mm DIVISIONAL GUN M1942 (ZIS-3)

This gun is identical with the M1939 except that it is fitted with a double baffle muzzle brake and is mounted on a modified carriage of the 57-mm gun, with tubular steel split trails. Remarkable for its lightness and mobility, it is somewhat unstable in action owing to its light weight.

This former standard light field piece has been replaced in the new Soviet division TO&E's. However, complete replacement of material has not yet been effected. Besides its use in the Soviet Army, it has been provided in quantity to all the Satellites.

CHARACTERISTICS

Caliber.....	76.2-mm (3 inches)
Muzzle velocity w/BB.....	2,231 feet per second
Muzzle velocity w/BVAP.....	3,167 feet per second
Range.....	14,545 yards
Length of tube w/muzzle brake.....	127.5 inches
Rate of fire.....	25 rounds per minute
Weight (firing position).....	2,460 pounds
Weight of projectile.....	13.5 pounds
Elevation.....	-5 to +37 degrees
Traverse.....	54 degrees



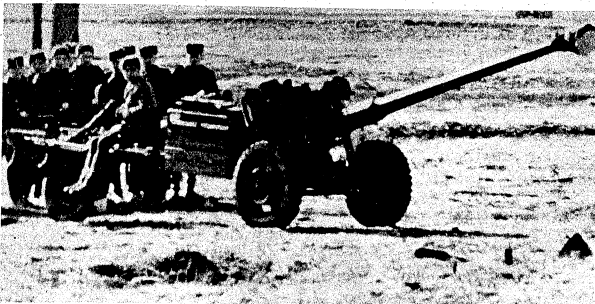
85MM DIVISIONAL GUN M1945

85-mm DIVISIONAL GUN M1945

The gun is an adaptation to field purposes of the 85-mm tank gun M1944 used with the T-34 medium tank, which in turn was derived from the original 85-mm antiaircraft gun M1939. It is believed to have somewhat better performance characteristics than its tank counterpart, however, it utilizes the same ammunition. The low silhouette carriage is light weight, and the recoil mechanism is behind the shield, mounted on top of the breech block. Trails are tubular. This piece is replacing the 76-mm M1942.

CHARACTERISTICS

Caliber.....	85-mm (3.35 inches)
Muzzle velocity.....	3,379 feet per second
Range.....	18,208 yards
Length of tube w/muzzle brake.....	184.5 inches
Weight in firing position.....	3,748 pounds
Weight of projectile w/AP.....	20.3 pounds
Weight of projectile w/HVAP.....	11 pounds
Rate of fire.....	20 rounds per minute
Elevation.....	-5 to +35 degrees
Traverse.....	54 degrees
Armor penetration.....	5.43 inches at 550 yards



85 MM AUXILIARY POWERED ANTI-TANK GUN (APAT-85)

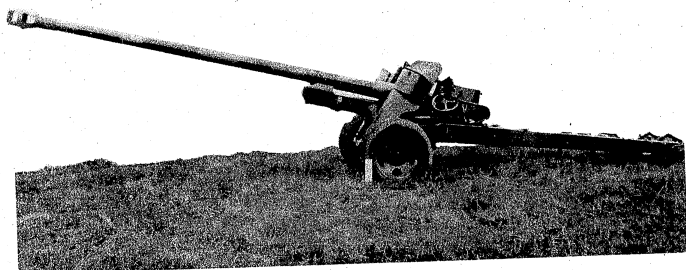
85-mm AUXILIARY POWERED ANTITANK GUN - APAT 85

This is the newest of Soviet artillery innovations. It is an 85-mm antitank gun M1945 on which has been mounted a small two cycle engine and a steering arrangement coupled to a large rubber tire trail wheel. By means of this modification, the weapon is capable of traveling under its own power carrying with it the full crew and a basic load of ammunition. This ammunition is stored in a removable steel box on the right trail.

The piece is capable of displacing when under fire, with no assistance from a prime mover, although it may be towed by a standard truck for long hauls. It is recognizable by the steering wheel and large trail wheel near the end of the trails and the motor housing mounted on the left trail.

CHARACTERISTICS

Caliber.....	85-mm (3.35 inches)
Muzzle velocity.....	2,379 feet per second (HVAP)
Range.....	16,208 yards
Length of tube w/muzzle brake.....	184 inches (15 feet, 4 inches)
Weight.....	5,000 pounds
Weight of projectile.....	10.92 pounds
Penetration.....	5.43 inches at 550 yards
Rate of fire.....	20 rounds per minute
Elevation.....	-5 to +35 degrees
Traverse.....	54 degrees
Maximum speed.....	10 miles per hour
Engine.....	2 cycle gasoline
Cruising range.....	5 miles



100MM GUN M1944

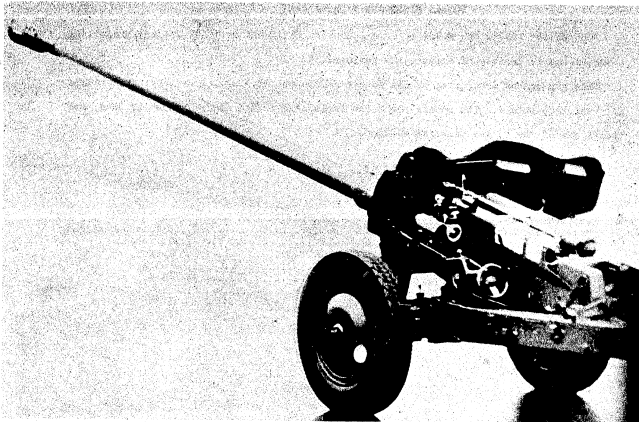
100-mm FIELD GUN M1944 (BS-3)

The Soviet 100-mm Gun M1944 is a dual purpose field and antitank weapon, exceedingly powerful and is capable of outstanding performance.

The gun can be recognized by its double-baffle muzzle brake, long tube, dual wheels and bent back shield. The recoil mechanism is located in the cradle below the tube, and trails are of the welded box-section type.

CHARACTERISTICS

Caliber.....	100-mm (3.94 in.)
Muzzle velocity.....	2,953 feet per second
Range.....	22,974 yards
Length of tube w/muzzle brake.....	225 inches
Weight in firing position.....	7,628 lbs.
Weight of AP projectile.....	34.6 lbs.
Rate of fire.....	8 to 10 rounds per minute
Elevation.....	-5 to +40 degrees
Traverse.....	55 degrees
Armor penetration.....	6.1 in. at 500 yards



100MM ANTI-TANK GUN M-1955

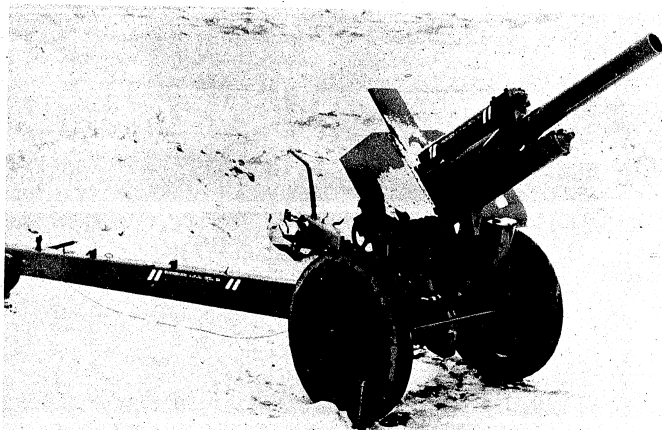
100-mm ANTITANK GUN M1955

This is the latest large caliber antitank gun displayed and was first seen in the 1955 Moscow Parade. Its carriage is a definite improvement over that of the M1944 gun and it is credited with better mobility and greater accuracy.

The piece is very similar in appearance to the 85-mm divisional gun, model 1945, the most easily recognizable difference being the box type trails and a pepper pot muzzle brake. It has a low curved shield and the recoil cylinders are on top of the tube, extending from the shield to the front of the breech ring.

CHARACTERISTICS

Caliber.....	100-mm
Range.....	25,000 yards
Length of tube.....	17 feet, 6 inches
Weight.....	5,000 pounds
Weight of projectile.....	55 rounds
Rate of fire.....	8 rounds per minute
Armor penetration.....	10.6 inches at 550 yards



122MM HOWITZER M1938

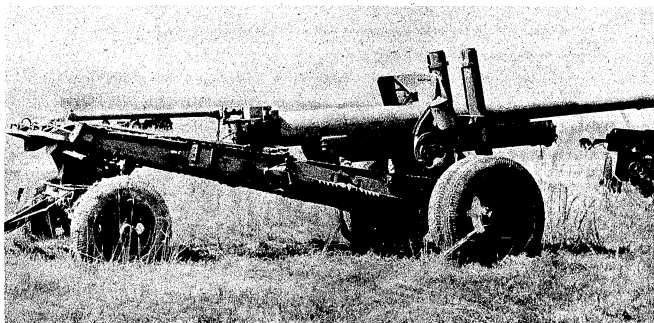
122-mm HOWITZER M1938 (M-30)

This is the first true Soviet design in the 122-mm series of divisional howitzers. It is now standard in the rifle, tank, and mechanized divisions of the Soviet Army, and was used extensively during World War II.

The recoil mechanism is housed in a cradle below the tube, and the recuperator is carried above the tube. A notable feature, copied from Bofors designs, is that the tube at the forward end is carried on four rollers during recoil. This piece uses the same basic design as the 152-mm Howitzer M1943.

CHARACTERISTICS

Caliber.....	122-mm (4.8 in.)
Muzzle velocity.....	1,690 feet per second
Range.....	12,904 yards
Length of tube.....	108 inches
Weight (firing position).....	4,960 lbs.
Weight of HE projectile.....	48 lbs.
Rate of fire.....	5-6 rounds per minute
Elevation.....	-5 to 46.5 degrees
Traverse.....	50 degrees



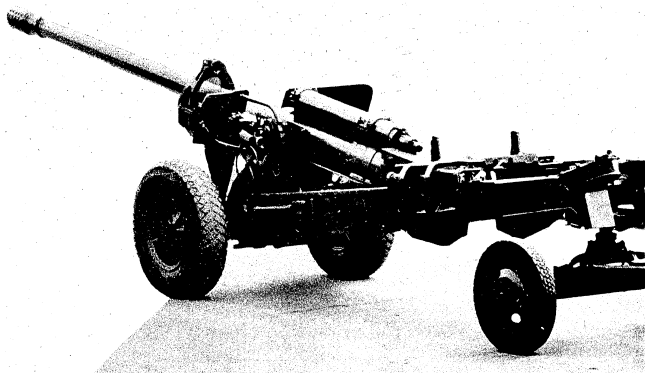
122MM GUN M-1931/37 (A-19)

122-mm CORPS GUN M1931/37 (A-19)

This piece is basically identical with the 122-mm Gun M1931, which it has replaced in the Soviet Army. The difference between the two pieces are in the carriages. The later model with the carriage similar to that of the 152-mm gun-howitzer M1937, is readily distinguished by the fact that the equilibrators slope backward, while those of the older gun slope forward. The later model also has a rack and pinion type elevating mechanism which allows a greater maximum elevation. Postwar versions of this weapon have dual wheels with pneumatic tires. This gun has been furnished in substantial quantities to the Satellite Armies.

CHARACTERISTICS

Caliber.....	122-mm (4.8 in.)
Muzzle velocity.....	2,625 f.p.s.
Range.....	22,747 yards
Length of tube.....	216 inches
Weight (firing position).....	15,692 lbs.
Rate of fire.....	5-6 rounds per minute
Elevation.....	-2 to +65 degrees
Traverse.....	58 degrees
Weight of HE projectile.....	55 lbs.



122MM FIELD GUN M-1954

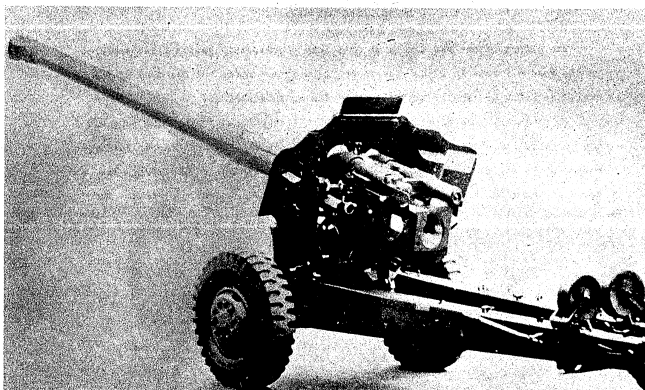
122mm FIELD GUN M1954

The oldest of the new family of artillery pieces, this weapon first appeared in the Moscow Parade in 1954. The weapon is a modern piece but has many of the characteristics of the old M1931/37 Field Gun of this caliber.

It is easily recognizable by the recoil cylinder located above the tube and the large collar around the tube forward of the shield. It has a pepper pot type muzzle brake and is jacked out of battery when in the traveling position. The carriage has large single pneumatic tires and large box type split trails. The spades are removed and placed on top of the trails when traveling. The ends of the trails are supported by a light pneumatic tired dolly.

CHARACTERISTICS

Caliber.....	122mm
Range.....	28,000 yds.
Length of tube.....	22 ft.
Weight.....	15000 lbs.
Weight of projectile.....	56 lbs.
Rate of fire.....	5-6 r.p.m.



122MM FIELD GUN M-1955

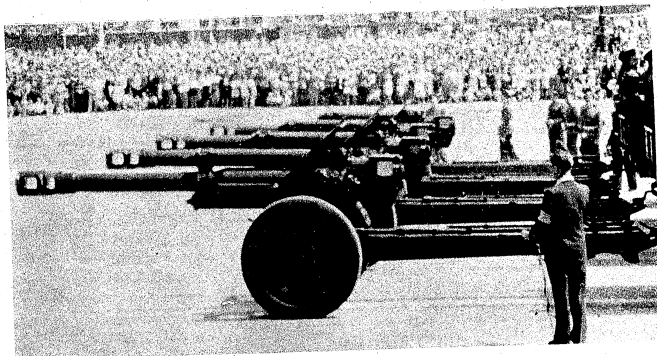
122mm FIELD GUN M1955

The second new gun of its caliber to appear in two years, this piece is a very mobile, light weight, field piece.

It is much more mobile than the 1954 model, capable of being towed directly by a prime mover without the use of a dolly. The tube is much shorter as are the trails. The spades remain fixed in travel position. Two steel caster wheels are mounted near the end of the trails for ease in handling. The recoil cylinders are mounted side by side on top of the shield and extend through the shield. Directly underneath the tube, just forward of the shield, is a circular firing platform. The tube has a double baffle muzzle brake. The carriage wheels are single and pneumatic tired.

CHARACTERISTICS

Caliber.....	122mm
Range.....	22,750 yds.
Length of tube.....	16.8 ft.
Weight.....	11,000 lbs.
Weight of projectile.....	56 lbs.
Rate of fire.....	5-6 r.p.m.



152MM HOWITZER M-1943 (D-1)

152-mm HOWITZER M1943 (D-1)

This weapon has a much lighter carriage than any previous model of this caliber. It is therefore much more mobile. It has a double-baffle muzzle brake. The carriage and recoil system are the same as that of the 122-mm Howitzer M1938. Thus, this weapon gives the same performance as its predecessors but has lighter weight and greater mobility.

CHARACTERISTICS

Caliber.....	152.4-mm (6 in.)
Muzzle velocity.....	1,667 feet per second
Range.....	13,560 yards
Length of tube w/muzzle brake.....	156 inches
Weight (firing position).....	7,937 lbs.
Weight of projectile.....	88 lbs.
Rate of fire.....	4 rounds per minute
Elevation.....	-5 to +63 degrees
Traverse.....	35 degrees



152MM HOWITZER M-1955

152mm HOWITZER M1955

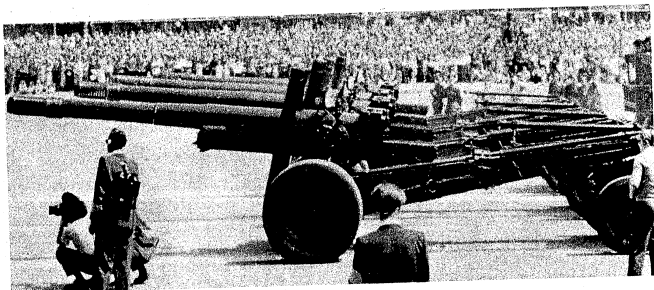
This piece is the latest development in this caliber. It is very light and mobile, having identically the same carriage as the 122mm Field Gun M1955.

The design of the carriage appears slightly heavier than that of the M1943 HOWITZER of this caliber but is a definite improvement.

The tube has a winged double baffle muzzle brake. It is towed by a tracked prime mover.

CHARACTERISTICS

Caliber.....	152mm
Range.....	15,000 yds.
Length of tube.....	12 ft.
Weight.....	10,000 lbs
Weight of projectile.....	80 lbs.
Rate of fire.....	4 r.p.m.



152MM GUN-HOWITZER M-1937 (ML-20)

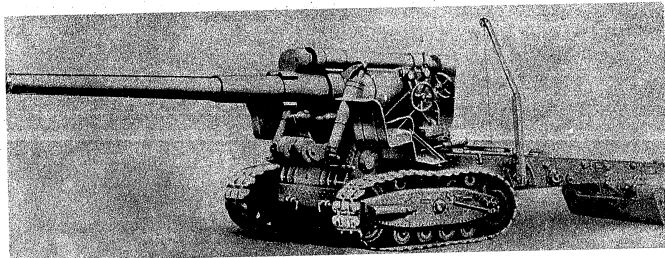
152-mm GUN HOWITZER M1937 (ML-20)

This well designed and sturdily constructed weapon was the principal Soviet piece for counterbattery and other long range destructive and interdiction fire in World War II. It is believed to be present in the Soviet Army in larger quantities than any other piece of the caliber and is highly regarded by them.

This piece is similar in appearance to its companion piece, the 122-mm gun M1931/37, since both use the same type of carriage with the prominent equilibrators. Apart from the difference in caliber, the 152-mm gun howitzer can be readily distinguished by its long multibaffle muzzle brake.

CHARACTERISTICS

Caliber.....	152.4-mm (6 inches)
Muzzle velocity.....	2,149 feet per second
Range.....	18,880 yards
Length of tube w/muzzle brake.....	185.51 inches
Weight in firing position.....	15,714 pounds
Weight of projectile.....	96 pounds
Rate of fire.....	4 rounds per minute
Elevation.....	-2 to +65 degrees
Traverse.....	58 degrees



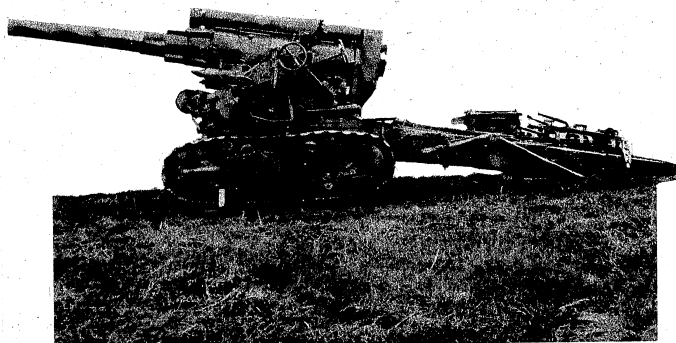
152 MM GUN M1935 (BR-2)

152-mm Gun M1935 (BR-2)

This is one of the three heavy artillery pieces of the Soviet Army which use the same full-tracked carriage. The other two are the 203-mm Howitzer M1931 and the 280-mm "Mortar" (howitzer) M1939. These pieces usually break down into two loads for travel, with the tube placed on a separate transporter, although they can be moved in a single load for short hauls. The 152-mm gun can be distinguished from the other two pieces by the equilibrators which are added to the carriage to offset the muzzle preponderance of the long tube. These are at right angles to the tube and are located between the cradle and the gunner's seat. Weapon is no longer in use.

CHARACTERISTICS

Caliber.....	152.4-mm (6 in.)
Muzzle velocity.....	2,887 f.p.s.
Range.....	29,527 yards
Length of tube.....	275.27 inches
Weight (firing position).....	40,093 lbs.
Weight of HE projectile.....	107 lbs. and 96 lbs.
Rate of fire.....	1 round every 2 min.
Elevation.....	0 to +60 degrees
Traverse.....	8 degrees



203MM HOWITZER M-1931 (B-4)

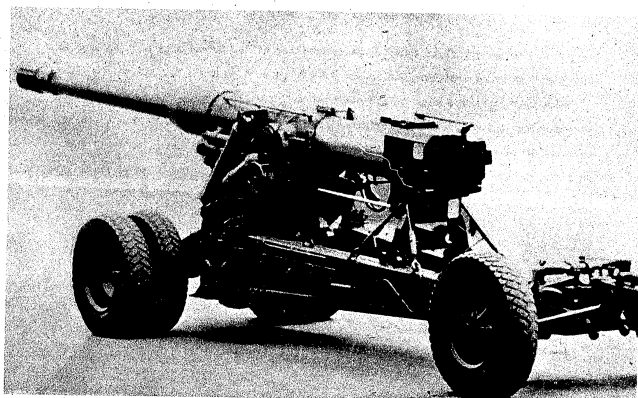
203-mm Howitzer M1931 (B-4)

This was the principal standard heavy howitzer of the Soviet Army and was used as army and army group artillery during and just subsequent to World War II.

The piece uses the same tracked carriage and, for long hauls, the same tube transporter as the 152-mm Gun M1935. Originally it was made with a slightly shorter tube, believed to be approximately 21 calibers, but the 24 caliber version is probably the only one in service today. Whether there has been any further production of this weapon in recent years is not known. It is being replaced by the 203-mm M1955.

CHARACTERISTICS

Caliber.....	203-mm (8 in.)
Muzzle velocity.....	1,991 feet per second
Range.....	19,712 yards
Length of tube.....	191.81 inches
Weight (firing position).....	29,021 lbs.
Rate of fire.....	1 round every 2 minutes
Elevation.....	0 to +60 degrees
Traverse.....	8 degrees
Weight of HE projectile.....	217 lbs.



203MM GUN HOWITZER M1955

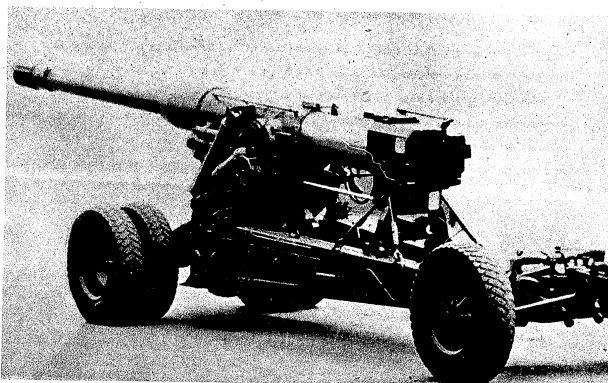
203mm GUN HOWITZER, M-1955

This is a newly designed, heavy field artillery piece being distinctly modern and uncomplicated.

It is very light and mobile for an artillery piece of this caliber. It is transported in one load with the tube being drawn out of battery in the cylindrical cradle. The carriage has large box type trails and dual wheels under the gun. A single wheeled dolly supports the rear of the trails when in traveling position. The complete recoil system is mounted beneath the tube, giving the weapon a very clean cut appearance.

CHARACTERISTICS

Caliber.....	203mm
Muzzle velocity.....	2000 feet per second
Range.....	28,000 yards
Weight of projectile.....	300 lbs.
Weight of piece.....	45,000 lbs.
Length of tube.....	348 inches
Rate of fire.....	1 round per minute
Elevation.....	-2° to 50°
Traverse.....	44°



203MM GUN HOWITZER M1955

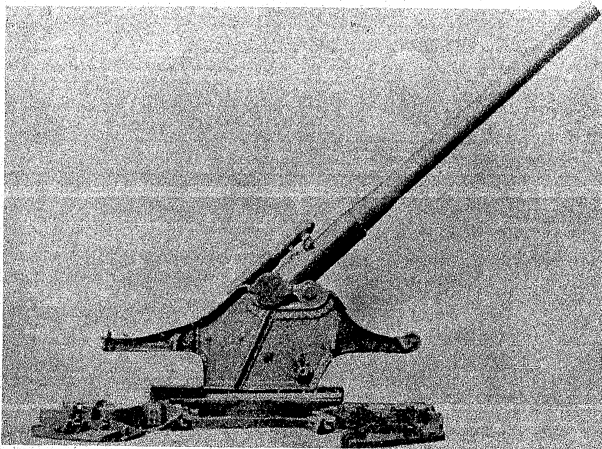
203mm GUN HOWITZER, M-1955

This is a newly designed, heavy field artillery piece being distinctly modern and uncomplicated.

It is very light and mobile for an artillery piece of this caliber. It is transported in one load with the tube being drawn out of battery in the cylindrical cradle. The carriage has large box type trails and dual wheels under the gun. A single wheeled dolly supports the rear of the trails when in traveling position. The complete recoil system is mounted beneath the tube, giving the weapon a very clean cut appearance.

CHARACTERISTICS

Caliber.....	203mm
Muzzle velocity.....	2000 feet per second
Range.....	28,000 yards
Weight of projectile.....	300 lbs.
Weight of piece.....	45,000 lbs.
Length of tube.....	548 inches
Rate of fire.....	1 round per minute
Elevation.....	-2° to 50°
Traverse.....	44°



210MM GUN M-1939 (BR-17)

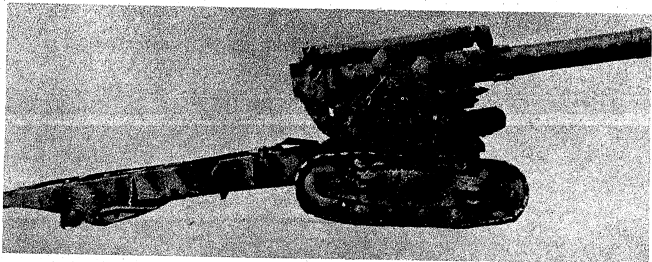
210-mm Gun M1939 (BR-17)

This super-heavy gun is of Skoda design and was purchased from Skoda by the USSR in undetermined quantities about 1940. There are also unconfirmed reports that the Soviets have produced copies of the piece.

This gun breaks down into three loads for displacement. The base plate assembly is the same as that of the 305-mm Howitzer and the carriage is basically the same, except that for the 210-mm gun, one cylinder of the recoil and recuperator mechanism is visible on top of the cradle.

CHARACTERISTICS

Caliber.....	210-mm (8.27 in.)
Muzzle velocity.....	2,624 feet per second
Range.....	33,278 yards
Length of tube.....	33 feet
Weight (firing position).....	95,195 lbs.
Weight of HE projectile.....	397 lbs.
Rate of fire.....	1 round every 3 minutes
Elevation.....	-6 to +50 degrees
Traverse.....	22 degrees



280MM MORTAR (HOWITZER) M-1939 (BR-S)

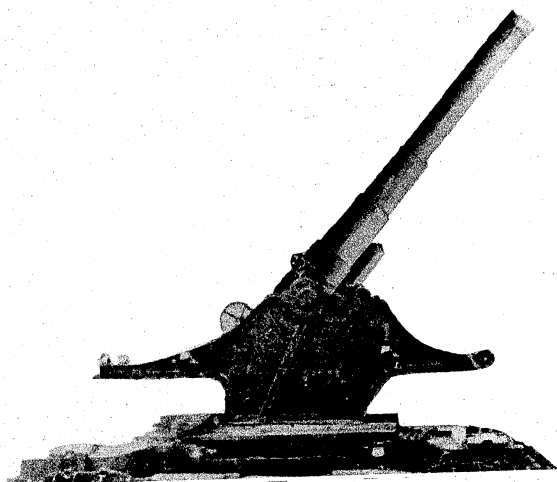
280-mm Mortar (Howitzer) M1939 (BR-S)

Although called a mortar by the Soviets, this is actually a heavy howitzer. The tube is approximately 16 calibers long and has the same maximum elevation, 60 degrees, as the 152-mm Gun M1939 and the 203-mm Howitzer M1931. All three use the same tracked carriage, but it is not certain that the 280-mm howitzer uses the same tube transporter as the other two.

While having a much shorter range, this piece can place a much heavier high explosive shell on the target. Whether there has been any further production of this weapon in recent years is not known.

CHARACTERISTICS

Caliber.....	280-mm (11 inches)
Muzzle velocity.....	1,378 feet per second
Range.....	11,500 yards
Length of tube.....	171.37 inches
Weight (firing position).....	40,565 lbs.
Weight of HE projectile.....	542 lbs.
Rate of fire.....	1 round every 4 minutes
Elevation.....	0 to +60 degrees
Traverse.....	8 degrees



305MM HOWITZER M1940 (BR-18)

305-mm Howitzer M1940 (BR-18)

This is the companion piece to the 210-mm Gun M1939 and has the same base plate assembly and a similar carriage. It can be distinguished from the 210-mm gun by the absence of the recoil cylinder on top of the cradle and by a large hand-wheel and other minor differences in the upper part of the carriage. The tube transporter is slightly shorter than that used for the 210-mm gun. This weapon originally was produced by Skoda and may have been copied by the Soviets. It has been employed for army group support but may no longer be in use. It breaks down into three loads which are drawn by full-tracked vehicles, and is emplaced by lowering the base plate into a square pit, and mounting cradle and tube on top.

CHARACTERISTICS

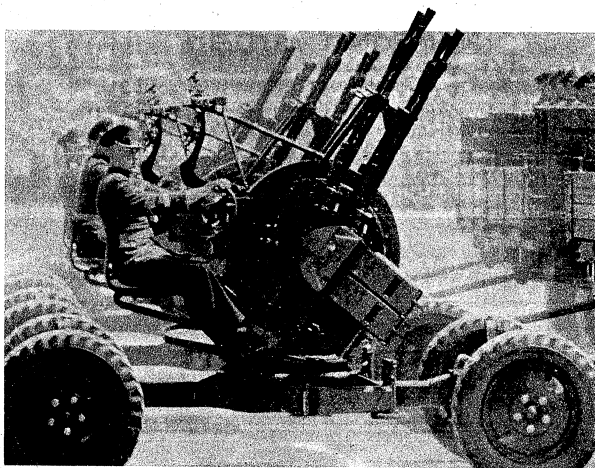
Caliber.....	304.8-mm (12 inches)
Muzzle velocity.....	1,740 feet per second
Range.....	18,000 yards
Length of tube.....	252.16 inches
Weight (firing position).....	97,000 lbs.
Weight of HE projectile.....	727 lbs.
Rate of fire.....	1 round every 3 minutes
Elevation.....	0 to 47 degrees
Traverse.....	22 degrees

ANTIAIRCRAFT ARTILLERY

Since the Germans devoted little attention to strategic bombing of the Soviet Union during World War II, the Soviets did not press the development and production of heavy antiaircraft guns and highly efficient antiaircraft fire control systems as strongly as did the Germans and Western Allies. With the advent of globe girdling bombers and atomic weapons, the Soviet antiaircraft weapons designers have been forced to concentrate on the development of better antiaircraft weapons and more accurate fire control.

As a result of this effort, a whole new family of antiaircraft weapons has been developed and put into production. These new weapons indicate very clearly the Soviet ability to copy the good features of other nation's weapons, add their own improvements, and come up with a very acceptable, modern piece of antiaircraft artillery.

Experiences in Korea indicate that current Communist fire control equipment and techniques were considerably superior to those employed by the Soviets in World War II. Details of principal Soviet antiaircraft weapons are presented on the following pages.



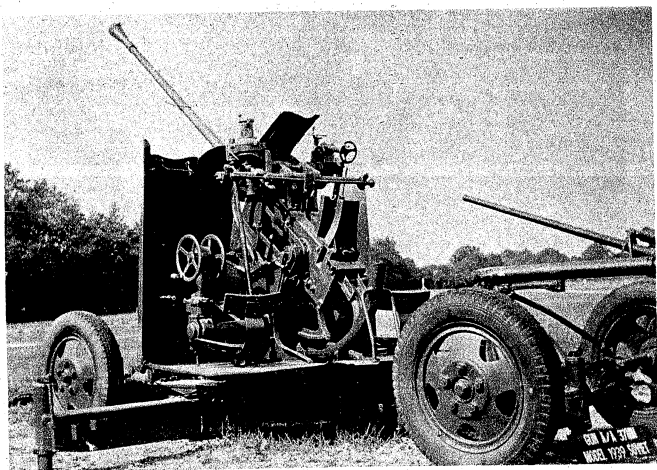
14.5MM HEAVY ANTI-AIRCRAFT MACHINE GUN ZPU-4

14.5-mm HEAVY ANTI-AIRCRAFT MACHINE GUN ZPU-2 and ZPU-4

This 14.5-mm machine gun is mounted in multiples of two and four on wheeled carriages for anti-aircraft use. The ZPU-2 consists of two machine guns mounted side-by-side on a two wheeled carriage. The ZPU-4 is four weapons mounted on a light four wheeled carriage very similar to that formerly used to mount the 25-mm anti-aircraft gun. These carriages may be towed by a truck and are lifted from their wheels by leveling jacks when in firing position. Recognition features are the large ammunition boxes on either side of the gun, and on the ZPU-4 the large drum on which the guns are mounted. These weapons are in wide use, but are not believed to be effective against fast flying aircraft.

CHARACTERISTICS

Caliber.....	14.5-mm
Ammunition available.....	AF, API, API-T, HEI
Operation.....	Recoil
Feeding device.....	Metal link belt
Method of cooling.....	Air
Cyclic rate of fire.....	800 rounds per minute per gun
Practical rate of fire.....	250 rounds per minute per gun
Barrel length.....	52 inches
Gun length.....	81 inches
Muzzle velocity.....	3,200 feet per second
Effective vertical range.....	3,500 feet
Effective horizontal range.....	3,000 yards



37MM ANTI-AIRCRAFT GUN M1939

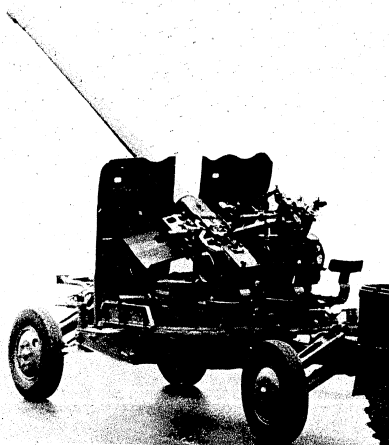
37-mm AUTOMATIC ANTI-AIRCRAFT GUN M1939

This light anti-aircraft gun is used in all types of line divisions as well as in anti-aircraft divisions and in the Air Defense Force.

This gun is based on the well-known Bofors 40-mm anti-aircraft gun which it closely resembles in outward appearance. It is elevated and traversed by double hand wheels instead of by cranks and sometimes it is provided with a shield.

CHARACTERISTICS

Caliber.....	37-mm (1.46 inches)
Muzzle velocity.....	2,887 feet per second
Vertical range.....	19,685 feet
Horizontal range.....	8,748 yards
Length of tube w/flash hider.....	101.36 inches
Weight in firing position.....	4,630 pounds
Weight of HE projectile.....	1.61 pounds
Rate of fire.....	160 to 180 rounds per minute
Elevation.....	-5 to +65 degrees
Traverse.....	360 degrees



57MM ANTIAIRCRAFT GUN MI950

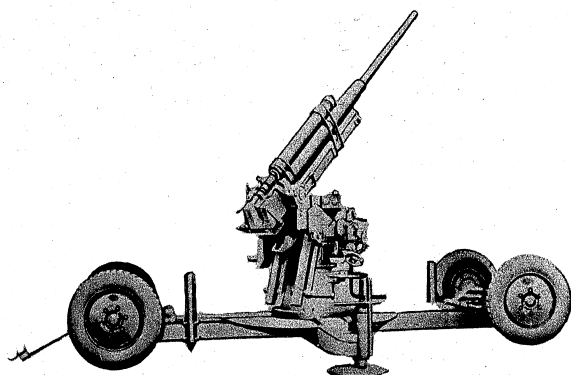
57-mm ANTIAIRCRAFT GUN, MI950

This is the latest light antiaircraft gun introduced by the Soviets. It is fully automatic and is fed from a loading tray on the left side of the receiver. It is capable of remote control by radar fire control units. Mounted on a light four wheeled carriage, it is easily recognizable by the three crew seats around the breech and the long thin tube with a pepper pot muzzle brake.

It is equipped with a shield and is fired from outriggers rather than from its wheels.

CHARACTERISTICS

Caliber.....	57-mm
Operation.....	Recoil
Length of tube w/muzzle brake.....	153 inches
Length of tube w/o muzzle brake.....	143 inches
Weight.....	7,840 pounds
Rate of fire.....	150 rounds per minute
Muzzle velocity.....	5,450 feet per second
Maximum vertical range.....	24,000 feet
Maximum horizontal range.....	11,000 yards
Effective antiaircraft range.....	15,000 feet
Elevation.....	10 to 90 degrees
Traverse.....	360 degrees



76MM ANTIAIRCRAFT GUN M-1938

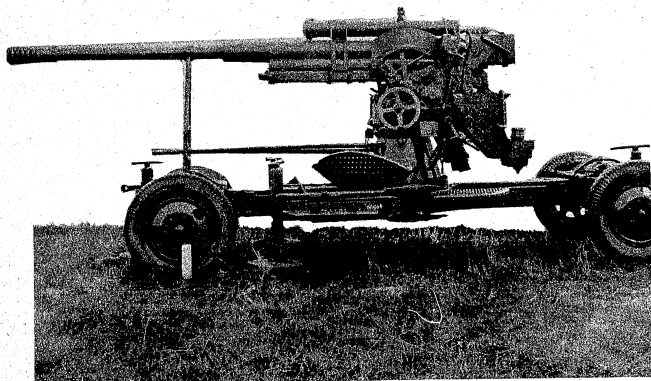
76-mm ANTIAIRCRAFT GUN M1938

This is the same basic gun as the M1931 except that it is mounted on a four wheeled carriage which considerably increases its mobility, and enables the gun to be placed in the firing position much more rapidly. The wheels remain attached in firing position. It has on-carriage fire control for direct and indirect fire against ground targets.

Limited standard use is being made of this gun at present, almost all having been replaced by the 85-mm anti-aircraft guns M1939 and M1944.

CHARACTERISTICS

Caliber.....	76.2-mm (3 inches)
Muzzle velocity.....	2,667 feet per second
Vertical range.....	31,168 feet
Horizontal range.....	15,639 yards
Length of tube.....	155.59 inches
Weight in firing position.....	9,480 pounds
Weight of HE projectile.....	14.57 pounds
Rate of fire.....	15 to 20 rounds per minute
Elevation.....	5 to +82 degrees
Traverse.....	360 degrees



85MM ANTIAIRCRAFT GUN M1939

85-mm ANTIAIRCRAFT GUN M1939

The 85-mm antiaircraft gun is found in Soviet antiaircraft division and air defense forces. The M1939 is outwardly similar in appearance to the M1944. The main differences between the two models are certain improvements in the tube and recoil mechanism which give the M1944 greater muzzle velocity, range and armor penetration.

The 85-mm M1939 also closely resembles the 76-mm antiaircraft gun M1938, using the same carriage and having similar recoil and breech mechanisms, but can be readily distinguished from the 76-mm gun by the multibaffle muzzle brake on the 85-mm gun.

CHARACTERISTICS

Caliber.....	85-mm (3.35 inches)
Muzzle velocity.....	2,625 feet per second
Vertical range.....	24,428 feet
Horizontal range.....	16,950 yards
Length of tube w/muzzle brake.....	174.01 inches
Weight in firing position.....	9,480 pounds
Weight of HE projectile.....	20.28 pounds
Rate of fire.....	15 to 20 rounds per minute
Elevation.....	-3 to +82 degrees
Traverse.....	360 degrees



100MM ANTI-AIRCRAFT GUN M-1949

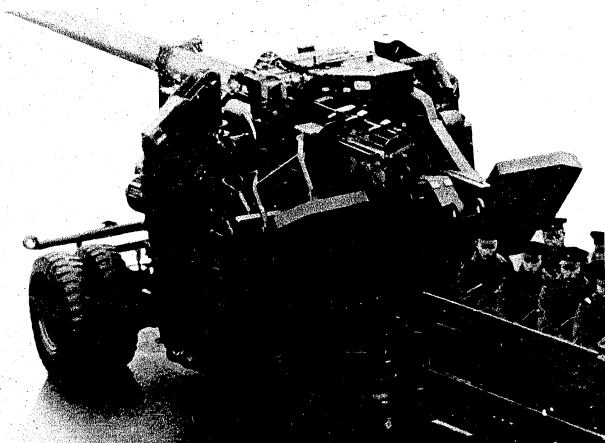
100mm ANTI-AIRCRAFT GUN M-1949

This piece was designed to replace the 85mm anti-aircraft gun which was the standard in World War II. Fire is controlled remotely by off-carriage radar and a director. The gun itself is equipped with a power rammer, automatic fuse setter, and multi-baffle muzzle brake. It is mounted on a heavy four-wheeled carriage and normally towed by a prime mover, M1950.

It is easily recognizable by the large mass of control equipment surrounding the breech and the two horizontal equilibrators extending forward of the shield.

CHARACTERISTICS

Caliber.....	100mm
Length of tube, w/muzzle brake.....	221 inches
Length of tube, w/o muzzle brake.....	197 inches
Weight in firing position.....	24,250 lbs.
Weight in traveling position.....	33,069 lbs.
Rate of fire.....	20 - 24 rounds per minute
Muzzle velocity.....	3200 feet per second
Maximum vertical range.....	50,000 feet
Effective AA range.....	35,000 feet
Elevation.....	5° to 82°
Traverse.....	360°



122MM ANTIAIRCRAFT GUN M1955

122-mm ANTIAIRCRAFT GUN M1955

This is the heavy weight of Soviet anti-aircraft guns. It is similar to the US 120-mm anti-aircraft gun, having practically the same heavy, dual wheel carriage. The weapon is towed by the heavy prime mover M1950 and has a very long, clean barrel with no muzzle attachment.

It is recognizable by the extremely heavy carriage, the abundance of control mechanisms on the carriage, the dual wheels, and the firing platform which folds up at a forty-five degree angle when the piece is in traveling position.

CHARACTERISTICS

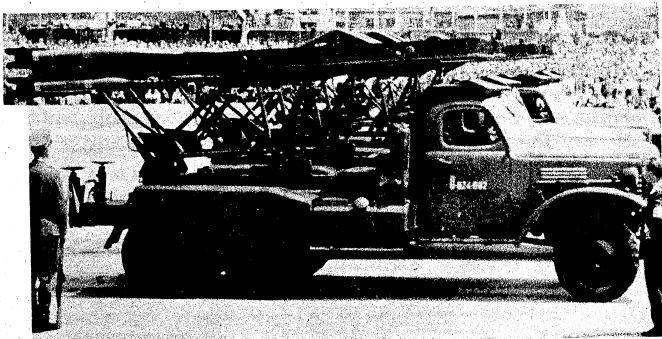
Caliber.....	122-mm
Length of tube.....	324 inches
Weight in firing position.....	55,000 pounds
Weight in traveling position.....	65,000 pounds
Rate of fire.....	10 to 12 rounds per minute
Muzzle velocity.....	3,300 feet per second
Maximum vertical range.....	55,000 feet
Effective anti-aircraft range.....	45,000 feet
Elevation.....	+5 to +80 degrees
Traverse.....	360 degrees

ROCKET LAUNCHERS

The Soviet Army during World War II employed solid fuel rockets on a larger scale than any other army. Although such weapons have an undoubted morale effect upon troops subjected to their fire, their wide-scale Soviet employment has been largely dictated by special economic and tactical conditions which made these relatively cheap substitutes for artillery valuable in World War II. Such weapons are effective as weapons of opportunity for close-in massed fire against static positions--a type of operation which characterized Soviet offensives of World War II, wherein accuracy was sacrificed for volume of fire.

Soviet rocket launchers are employed primarily in field roles as weapons of opportunity. Their area fire is used to break up concentrations of troops and materiel.

The rocket launchers illustrated are mounted on 6x6 or 6x4 trucks. During World War II, rocket launchers were placed on many types of mounts, including tanks and river craft. Long prepared offensives against static positions were often supported by great concentrations of immobile launching rails, each set being sited in a separate emplacement.



132MM ROCKET LAUNCHER M-13

132-mm ROCKET LAUNCHER M-13

This is a basic field rocket launcher of the Soviet Army and is still found in many organizations although it is being replaced by the BM-14. It was mounted on various vehicles during World War II and is shown here on its present standard mount, the 6 x 6 truck. The rockets are fired electrically from the cab. The launcher is laid roughly by moving the vehicle and is sighted by a simple panoramic artillery sight on the left of the mount. For firing, the two jacks at the rear of the truck are lowered to help absorb the shock.

CHARACTERISTICS

Caliber.....	132-mm
Number of rails.....	8
Number of rockets.....	16
Total traverse.....	10 to 20 degrees
Horizontal range.....	9,846 yards
Weight of rocket.....	95.7 lbs.
Fire control device.....	Panoramic sight
Maximum velocity (BM Model RS-132).....	1,148 feet per second
Time to reload.....	6 to 10 minutes
Elevation limits.....	+15 to +45 degrees
Mount.....	ZIS-151 truck or Studebaker



150MM. ROCKET LAUNCHER BM-14

150mm ROCKET LAUNCHER BM-14

This is a multiple tube launcher mounted on a standard truck chassis. Special equipment for the truck includes firing jacks on the rear to help absorb the shock of firing and a steel shield for the windshield and side windows on the cab. This shield is folded up on top of the cab when not in use. The crew rides on seats provided between the cab and the launcher proper.

The rockets are fired electrically and are utilized in salvo firing for saturation type coverage. Elevation and traverse of the launching frame is manual with possible power assist.

This piece is recognized by its 16 small tubes situated in 2 banks of 8 tubes each.

CHARACTERISTICS

Caliber.....	150mm
Number of rounds.....	16
Stabilization.....	Fin
Length of launching tubes.....	4.5 feet
Total traverse.....	360°
Range.....	9000 yards
Fire control.....	Panoramic artillery sight
Mount.....	ZIS-151 truck



200MM ROCKET LAUNCHER

200-mm ROCKET LAUNCHER

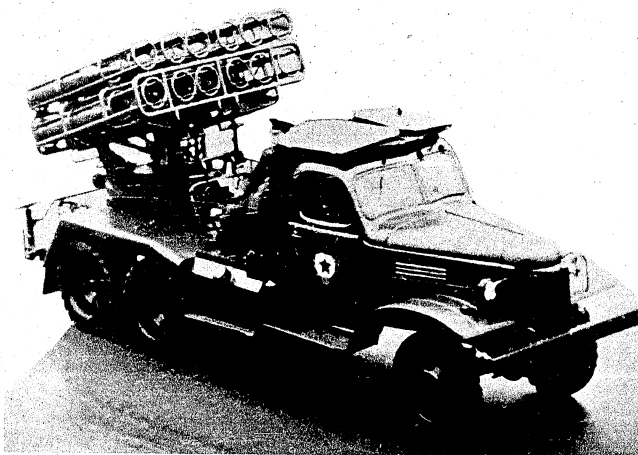
This weapon is mounted on the same truck as the 150-mm BM-14, and accessories for the truck are identical. Unlike the 150-mm BM-14, the new 200-mm weapon utilizes open crate launching frames with guide rails spiraled to give the rockets a right-hand spin when they are fired. These frames, four in number, are arranged in a single bank.

In addition to being quite long (approximately ten feet), the four-finned rocket fired by this launcher is streamlined and fin-spin stabilized. These features make the 200-mm rocket launcher superior to all other Soviet launchers in both range and accuracy.

This piece may be recognized by the four large square launching frames which are constructed of steel rods and the long ballistically shaped rockets which are carried in the launching frames.

CHARACTERISTICS

Caliber.....	200-mm
Number of rounds.....	4
Stabilization.....	Spin-fin
Length of launching rails.....	10 feet
Total traverse.....	160 degrees
Range.....	22,000 yards
Fire control.....	Panoramic artillery sight
Mount.....	ZIS-151 truck



220MM ROCKET LAUNCHER BM-24

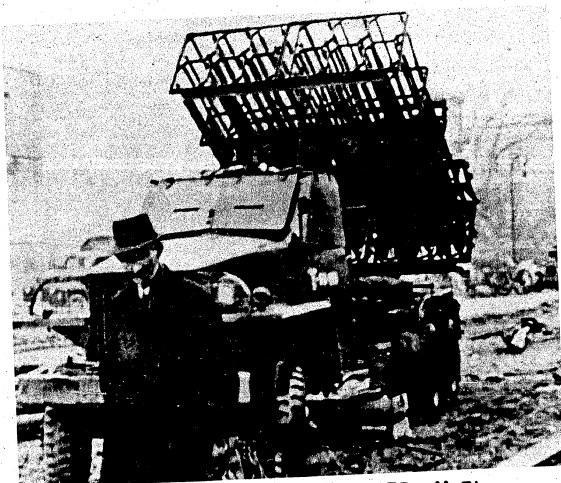
220-mm ROCKET LAUNCHER BM-24

This piece is mounted on the same truck as the 150-mm BM-14, and the 200-mm Rocket Launcher. It is, like the 200-mm weapon, an open crate type. The launching frames, however, are twelve in number arranged in two banks of six frames each. Neatly and compactly constructed, this launcher is apparently equipped with elevation and traversing mechanisms designed to improve accuracy. It fires, electrically, a spin stabilized rocket to a range of approximately 10,000 yards. Rocket spin is induced by angled venturi in the base of the round. The weapon is employed for salvo fire for greater area coverage.

It may be recognized by the twelve large rockets which resemble conventional artillery projectiles.

CHARACTERISTICS

Caliber.....	220-mm
Number of rounds.....	12
Stabilization.....	Spin
Length of launching rails.....	5.6 feet
Total traverse.....	360 degrees
Range.....	10,000 yards
Fire control.....	Panoramic artillery sight
Mount.....	ZIS-151 truck



300MM ROCKET LAUNCHER M-31

300-mm ROCKET LAUNCHER M-31

This is the heavyweight of Soviet field rocket launchers. It is found in army and army group rocket units and sometimes in artillery divisions. It has only about one-half the range of the M-13, but this disadvantage is offset by its ability to deliver approximately six times as much explosive per rocket.

CHARACTERISTICS

Caliber.....	300-mm
Number of rails.....	12
Number of rockets.....	12
Total traverse.....	20 degrees
Horizontal range.....	TS 31 -- 4,730 yards
Horizontal range.....	TS 52 -- 4,374 yards
Weight of rocket.....	201.72 pounds
Fire control device.....	Panoramic sight
Time to reload.....	15 minutes
Elevation limits.....	+10 to +50 degrees
Mount.....	ZIS-151 or Studebaker

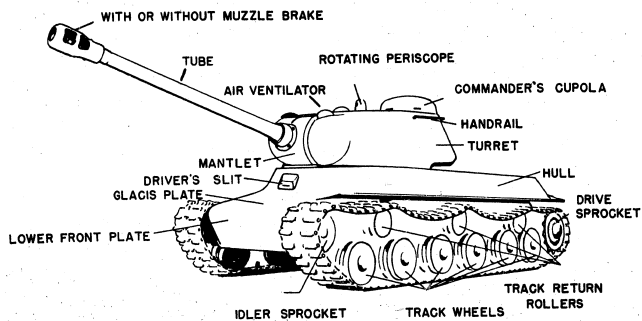
TANKS

Soviet armored troops are equipped with two standard medium tanks and one heavy tank. The two mediums being the T34(85) and the T54. The T54, being the new Soviet medium tank, is gradually replacing the T34(85).

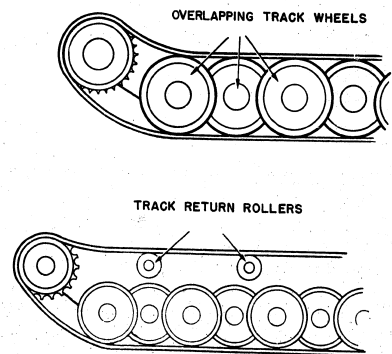
In view of Soviet tank design trends, it appears that they are continuing to concentrate on the development of tanks which possess high mobility combined with maximum armor protection.

The Soviets are also striving to increase the number of armored units within their army.

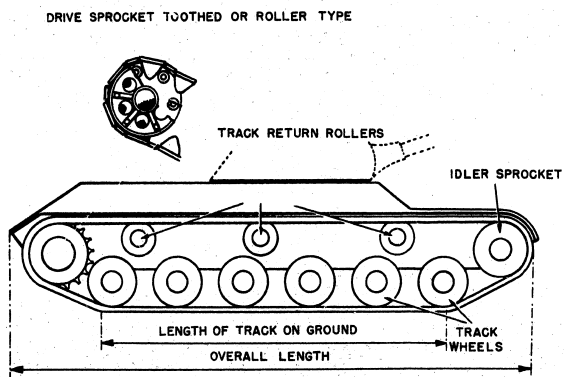
Detailed descriptions of the principle Soviet tanks are presented on the following pages.



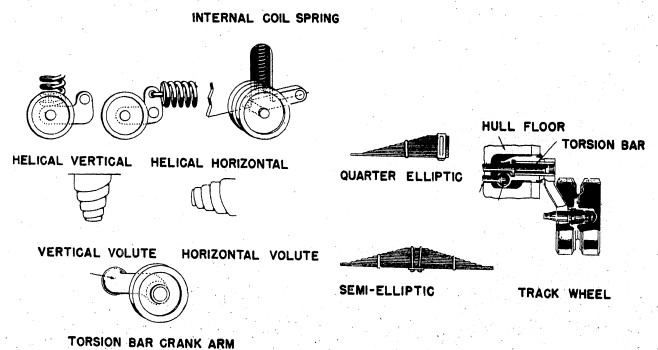
TANKS



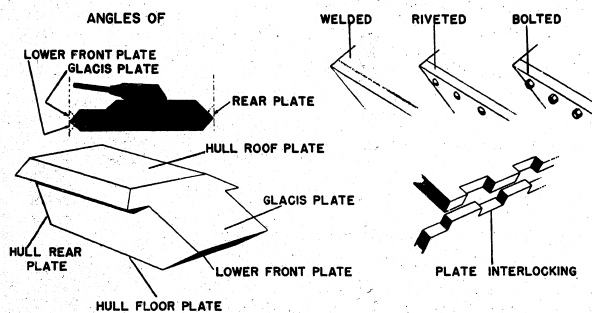
TANK SUSPENSION SYSTEM



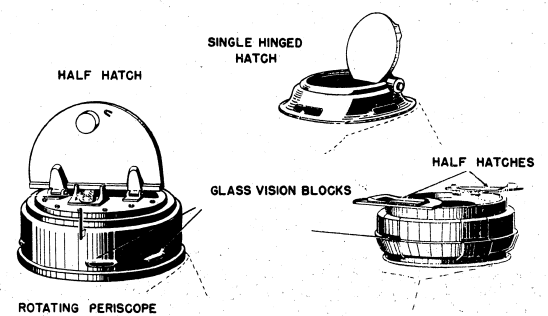
TANK SUSPENSION SYSTEM



SPRINGS

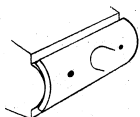


HULL CONSTRUCTION

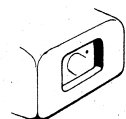
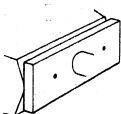


CUPOLAS

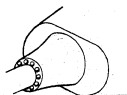
EXTERNAL CURVED



EXTERNAL FLAT



INTERNAL



CIRCULAR PROJECTING

MANTLETS

MULTI-BAFFLE



SINGLE BAFFLE



DOUBLE BAFFLE

MUZZLE BRAKES



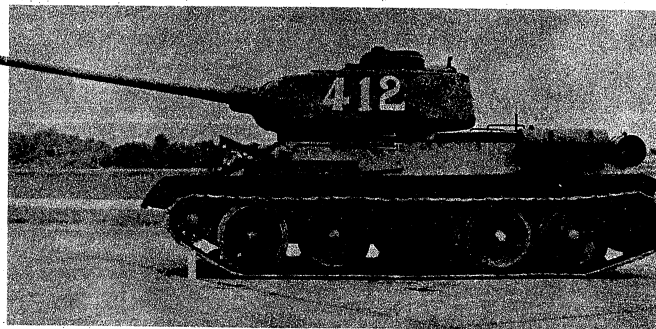
T-34/76 MEDIUM TANK

T34/76 (Medium Tank)

This is the original Soviet medium tank. It first appeared in 1941 and was considered to be one of the best tanks in use at that time. Its original armament was a 76mm gun of twenty-nine calibers in length, but was later replaced with a 76mm tank gun M1940 (F34) of thirty-nine calibers long. This tank has the greatest spacing of the road wheels between the second and third road wheel. It carries the drum type external fuel tanks. It is equipped with a cast turret. Although this model is considered obsolescent, it is still encountered in some Soviet units and in the hands of the satellites.

CHARACTERISTICS

Vehicle		Weapon
Weight (combat loaded).....	61,200 lbs.	Primary armament 76mm
Crew	4	Traverse..... 360°
Width (track centers).....	98 inches	Elevation limits..... -3 to +30°
Width of track.....	19.8 inches	No. of rounds carried 77
Armor:		Max. Armor Pene. (500 yds) 2.95 in.
Hull.....	1.8 inches at 60°	Ground pressure..... 9.3 PSI
Turret.....	2.6 inches rounded	Suspension..... Christie
Maximum speed.....	35 miles per hour	No. of road wheels... 5
Cruising range:		
Paved road.....	190 miles	
Earth road.....	150 miles	
Fording depth.....	51 inches	
Secondary armament.....	2 - 7.62mm DT tank MG's	
Engine.....	B2 - 34 V-12 cylinder Diesel	



T-34 (85) MEDIUM TANK

T-34 (85) MEDIUM TANK

This vehicle mounts an 85-mm gun, and is the former medium tank of the Soviet Army. It began to replace the T-34 (76) by the summer of 1944, and to date is available in very large quantities.

Recognition features: long tube without muzzle brake; curved gun mantlet; slight sloping turret sides; cupola on top of turret; two cylindrical auxiliary fuel tanks on each side and five double-road wheels with no track support rollers (Christie suspension). The main armament consists of an 85-mm tank gun and as secondary armament one ball mounted and one coaxial turret-mounted machine gun.

CHARACTERISTICS

Vehicle	Weapon
Height.....95 inches	Primary armament.....One 85-mm tank gun
Length.....236 inches	Traverse.....360 degrees
Crew.....5 men	Elevation limits.....-5 to +25 degrees
Weight.....35.2 tons	Range.....10,498 yards
Width.....118 inches	Rounds carried.....56 rounds
Armor	Armor penetration
Ball.....1.6 inches	500 yards.....5.4 inches
Turret.....3 inches	
Maximum speed.....35 miles per hour	
Cruising range.....190 miles	
Fording depth.....51 inches	
Secondary armament.....Two 7.62-mm DT MG's	
Engine.....V-12 cylinders, diesel	
493 hp at 1,800 rpm	
Ground pressure.....11.4 PSI	



T-44 (MEDIUM TANK)

T-44 MEDIUM TANK

The T-44 tank was to be the replacement for the T-34 (85). This tank differs from the T-34 (85) by its larger and more heavily sloped turret, location of driver's hatch, the vertical upper hull side plate, the hull machine gun which fires through a hole flush with the front glacis plate, and the spacing of the road wheels. (The greatest space on the T-34 (85) being between the second and third, while it is between the first and second on the T-44.)

CHARACTERISTICS

Vehicle	Weapon
Crew.....4	Primary armament.....85-mm tank gun
Weight.....35 tons	Rounds carried.....56
Width.....10 feet, 2 inches	Suspension.....Christie
Armor	Number of road wheels.....5
Hull.....3.54 inches	
Turret.....4.72 inches	
Maximum speed.....32 miles per hour	
Secondary armament.....Two 7.62-mm MG's	



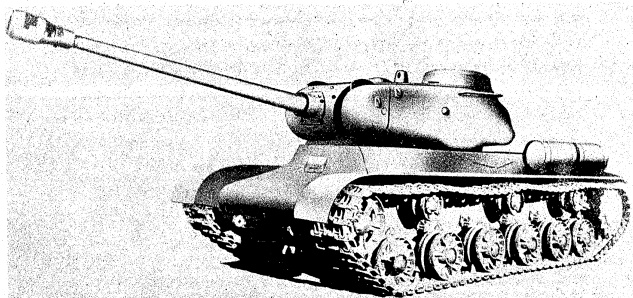
T54 (MEDIUM TANK)

T-54 MEDIUM TANK

This is the new Soviet medium tank, which replaces the T-34 and T-44 medium tanks. It has a much smoother design than either of its two predecessors. The main armament on this tank is 100-mm. The old drum-type auxiliary fuel tanks which were always on the T-34 have been replaced by streamlined tanks and mounted on the fenders. The greatest spacing of the road wheels is between the first and second road wheels and between the second and third on the T-34. One of the identifying features is the low rounded turret. It has an antiaircraft machine gun which can be mounted on the top of the turret. This tank has a much improved armor design and better performance characteristics than any other previous Soviet tank.

CHARACTERISTICS

Vehicle	Weapon
Weight.....39.7 tons	Primary armament.....100-mm gun
Crew.....4	Traverse.....360 degrees
Width (track centers)....104 inches	Rounds carried.....34 rounds
Width of track.....22 inches	Ground pressure.....11.4 PSI
Length.....236 inches	Suspension.....Christie
Height.....94 inches	Number of road wheels...5
Maximum speed.....30 miles per hour	
Cruising range.....224 to 249 miles	
Fording depth.....55 inches	
Secondary armament.....7.62-mm MG's - two	
Engine.....V-12 cylinders, diesel	



JS-1 HEAVY TANK

JS-1 (Heavy Tank)

This was the first in the line of Joseph Stalin heavy tank. The chassis for this tank is basically the same as the older heavy tank, known as the KV line. This tank has a machine gun located in the left rear side of the turret. This tank has been rendered obsolescent by later models, but is still found in small numbers in the satellites and possibly some Soviet armored units.

CHARACTERISTICS

Vehicle	Weapon
Weight 50 tons	Main Armament 122mm
Width 122 inches	Traverse 360°
Height 108 inches	Elevation limits -3° to +20°
Length 378 inches	Range 16,300 yards (approx)
Crew 4	No. of rounds carried.. 28
Width of track 25 inches	Ground pressure 11.4 PSI
Armor:	Armor penetration (500 yds). 206mm
Hull..... 3 inches at 74°	Suspension Torsion bar
4.13 inches at 30° stepped	No. of roadwheels..... 6
Turret..... 4 inches rounded	
Maximum speed..... 23 miles per hour	
Cruising range 90 miles	
Fording depth 52 inches	
Secondary armament 2 - 7.62mm MG's	
Engine 12 cye "V" Type Diesel	



JS-2 HEAVY TANK

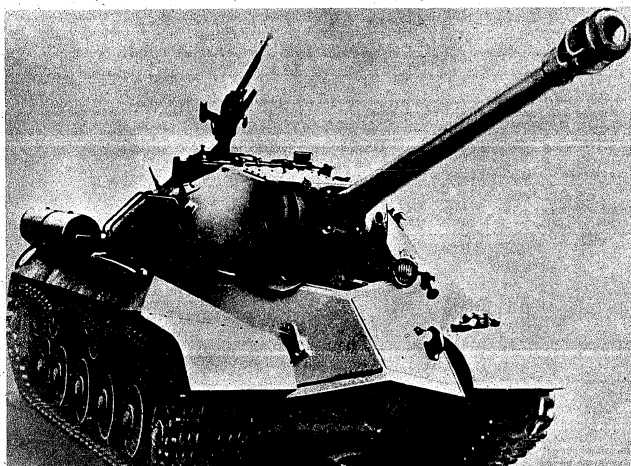
JS-2 HEAVY TANK

The Joseph Stalin-2 (JS-2) heavy tank is powered by a Y-12 diesel engine. The drive sprocket is located in the rear. Although outmoded by the production of the JS-3 tank, this vehicle is still significant within its weight classification. The primary armament consists of a 122-mm gun. As secondary armament, three 7.62-mm and one 12.7 machine guns are mounted. (One of the machine guns mounted in the left rear of the turret).

An older tank, the JS-1, which mounts a 122-mm gun, also exists. It is comparable to the JS-2, significant modifications were limited to front glacis plate design to give better frontal protection, and turret shape. Will be found in Satellite armies.

CHARACTERISTICS

Vehicle		Secondary armament ... One 12.7mm & three 7.62mm MG	
Crew	4 men	Ground Pressure	11.1 PSI
Weight	50.6 tons	Engine	V-12 cyl; diesel 512 HP at 2000 rpm
Length (hull)	263 inches	Weapon	
Width (overall)	10.2 feet	Primary armament	One 122mm Tank Gun
Height	108 inches	Traverse	360 degrees
Width	120 inches	Elevation limits	-3 to +25°
Armor:		Range	16,300 yds (apprx)
Hull	4.33 inches	No. Rounds carried ..	28
Turret	4.0 inches	Max armor pene (500 yds) ..	5.9 inches
Maximum speed	23 mph		
Cruising range	156-180 miles		
Fording depth	4 ft 3 ins		



JS-3 (HEAVY TANK)

JS-3 HEAVY TANK

The JS-3 tank, nicknamed "The Pike (Shchuka)," by Soviet troops because of its pointed bow (suggesting a fishhead), represents a completely new concept of armor layout and design. In this model, Soviet designers achieved their goal of obtaining maximum armor protection with minimum weight. The turret is almost circular, and resembles a turtle's domed shell.

The main armament consists of a modified 122-mm field gun, which has been adapted to armor usage. The secondary armament consists of a 12.7-mm machine gun mounted on top of the turret and a coaxially mounted 7.62-mm machine gun.

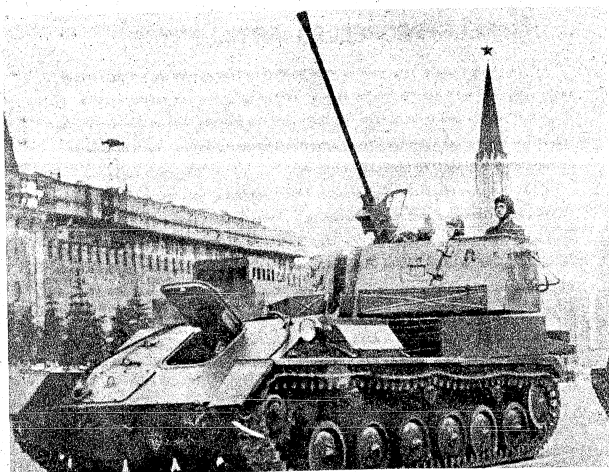
CHARACTERISTICS

Vehicle		Vehicle (continued)	
Height.....	96 inches	Engine.....	B-12 cylinders, diesel
Length.....	263 inches		512 horsepower at
Crew.....	4 men		2,000 rpm
Weight.....	50.6 tons	Ground pressure.....	11.1 PSI
Width.....	120 inches		
Armor		Weapon	
Bull.....	4.72 inches	Primary armament.....	One 122-mm gun
Turret.....	7.9 inches	Traverse.....	360 degrees
Maximum speed.....	23 miles per hour	Elevation limits.....	-3 to +20 degrees
Cruising range.....	150-180 miles	Range.....	16,500 yards
Fording depth.....	51 inches	Rounds carried.....	28 rounds
Secondary armament.....	One 12.7-mm & One 7.62-mm DP MG	Armor penetration	
		500 yards.....	5.9 inches

SELF-PROPELLED ARTILLERY

Although the Soviets experimented with self-propelled pieces on a very limited scale prior to World War II, the utility of such weapons was not appreciated until the Soviet winter counteroffensives of 1941-42. The Soviets then realized that they had missed inflicting decisive defeat upon the Germans in several sectors because of lack of self-propelled (assault) artillery.

Although makeshift pieces (especially tank destroyers) appeared early in the war, it was not until early 1943 that factory built types began to appear. With the exception of the weapons mounted on the light tank chassis, these models follow the German design of self-propelled antitank guns. The weapon is mounted low in a well-armored, covered fighting compartment and has little traverse. Gun caliber is generally larger than that of the gun carried by the tank for which the chassis is designed, and the silhouette is lower. Soviet nomenclature for SP weapons is "SU", followed by a number which usually indicated the gun caliber, e.g. SU-100. Models using the JS chassis are designated "JSU".



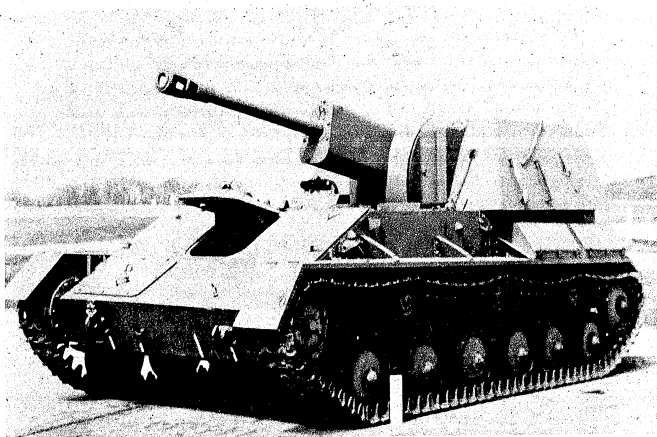
37MM ANTI-AIRCRAFT GUN M1939 ON SU-76

37-mm ANTI-AIRCRAFT GUN M1939 ON SU-37

This self-propelled weapon consists of the 37-mm anti-aircraft gun M1939 mounted on a modified version of the obsolete T-70 light tank chassis. The gun is carried in a lightly armored superstructure on top of the vehicle and is mounted so as to give 360 degrees traverse. It is believed to be designed for the protection of moving columns as well as for normal anti-aircraft artillery roles. It has not, however, been identified with Soviet field units or in Satellite forces, and has been observed only at the Moscow parades in 1946. Even the official Soviet nomenclature of the vehicle is not known, but is believed to be SU-37 by analogy with other self-propelled pieces.

CHARACTERISTICS

Vehicle	Weapon
Crew.....4 men	Primary armament.....One 37-mm AA gun
Weight.....12.1 tons	Traverse.....360 degrees
Width.....8.96 feet	Elevation limits.....-5 to +85 degrees
Frontal armor.....Inches .98	Vertical range.....19,685 feet
Maximum speed.....20 miles per hour	Horizontal range.....8,184 yards
Cruising range.....224 miles	Rate of fire.....160 to 180 rounds
Fording depth.....3 feet	per minute
Secondary armament.....None	
Engine.....Two 6-cylinder gasoline	



76MM SELF PROPELLED GUN MI942/43 ON SU-76

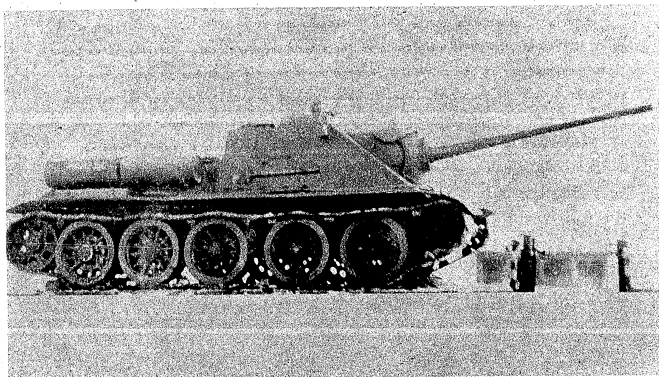
76-mm SELF-PROPELLED GUN MI942/43 ON SU-76

This is an adaptation of the 76-mm divisional gun MI942 (ZIS-3) to a self-propelled role. Originally the SU-76 was developed for a tank destroyer role. Shortly after its initial employment, it became evident that it was not powerful enough to combat the German heavy tanks. It continued, however, as a standard SP artillery piece, but was relegated to the role of supporting artillery organic to the rifle regiment.

Recognition features: Double-baffle muzzle brake; extension of mantlet housing recoil and recuperator mechanisms; a truncated 4-sided pyramidal superstructure located to the rear on vehicle hull; six small, single rubber-tired road wheels and three small track support rollers.

CHARACTERISTICS

Vehicle		Weapon	
Crew	4 men	Primary armament	One 76-mm Gun
Weight	12.3 tons	Traverse	30 degrees
Width	8.96 feet	Elevation limits	-5 to +15 degrees
Armor	inches .98	Range	14,545 yards
Maximum speed	28 miles per hour	No. of rounds carried	60 rounds
Cruising range	224 miles	Max. armor penetration	
Fording depth	3 feet	550 yds	3.62 inches
Secondary armament	None		
Engine	Two 6 cya, gasoline, 140 HP each		



85MM SELF-PROPELLED GUN M-1943

85-mm SELF-PROPELLED GUN M1943 (D5-S85 AND D5-S85A) ON SU-85

This weapon represents the first attempt to combine the 85-mm antiaircraft gun with the T-34 tank chassis. It consists of an adaptation of the 85-mm antiaircraft gun M1939 (less muzzle brake) to a self-propelled assault role, primarily as a tank destroyer.

This gun, which is ballistically almost identical with its parent antiaircraft piece, is mounted in a well-armored and a well-sloped superstructure. The two models differ only in that the D5-S85A uses the panoramic sight of the 76-mm field gun M1942 and has a breech mechanism which is not interchangeable with that of the earlier D5-S85 (antiaircraft gun).

CHARACTERISTICS

Vehicle	Weapon
Crew.....4 men	Primary armament.....One 85-mm gun (D5-S85)
Weight.....32.5 tons	Traverse.....20 degrees
Width.....10 feet	Elevation limits.....5 to 75 degrees
Armor.....1.8 inches	Range.....10,498 yards
Maximum speed.....25 miles per hour	Rounds carried.....48 rounds
Cruising range.....190 miles	Armor penetration 500 yards.....5.4 inches
Fording depth.....4 feet, 3 inches	
Secondary armament.....None	
Engine.....V-12 cylinders, diesel 455 hp at 1,800 rpm	



100MM SELF-PROPELLED GUN M-1944 (D-10S) ON SU-100

100-mm SELF-PROPELLED GUN M1944 (D10-S) ON SU-100

This weapon, which replaced the SU-85 in the latter part of 1944, is now organic to Soviet rifle, mechanized, and tank divisions. Because of its combination of high armor penetration with mobility and substantial armor protection, it is outstanding as an antitank or assault gun.

The SU-100 consists of an adaptation of the 100-mm field (antitank) gun M1944 (BS-4) on the T-34 medium tank chassis. It is basically identical to its towed counterpart. The superstructure generally is similar in appearance to that of the SU-85; main differences are the gun tube, different shaped gun mantlet, the use of a circular cupola which is faired into the side of the superstructure, and other minor details.

CHARACTERISTICS

Vehicle	Weapon
Crew.....4 men	Primary armament.....One 100-mm AT gun
Weight.....33.1 tons	Traverse.....32 degrees
Width.....10 feet	Elevation limits.....-2 to +17 degrees
Frontal armor.....3.0 inches at 50 degrees	Range.....15,315 yards
Maximum speed.....35 miles per hour	Rounds carried.....34 rounds
Cruising range.....190 miles	Armor penetration.....6.1 inches at 550 yards
Fording depth.....4.4 feet	
Secondary armament.....None	
Engine.....V-12 cylinders, diesel	
493 hp at 1,800 rpm	



122MM SELF-PROPELLED GUN M-1944 (A-19S) ON JSU-122

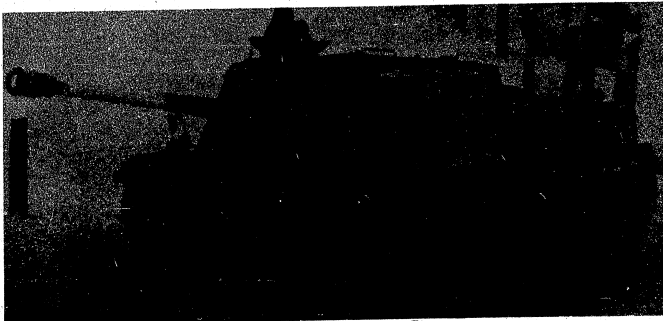
122-mm SELF-PROPELLED GUN M1944 (A-19S) ON JSU-122

This consists of the 122-mm corps gun M1931/37 (A-19S), adapted to a self-propelled assault role by mounting it on the chassis of the Joseph Stalin heavy tank. While giving excellent performance as a flat-trajectory field gun, it is inferior in armor penetration to the 100-mm gun of the SU-100. Small numbers have been reported in the hands of Polish and Hungarian troops, who have been provided with surplus specimens for training purposes.

The weapon, which has the same chassis and superstructure as the JSU-122 (D-25S) and JSU-152, is distinguishable from these mainly by the absence of a muzzle brake.

CHARACTERISTICS

Vehicle	Weapon
Crew.....5 men	Primary armament.....One 122-mm gun
Weight.....51 tons	Traverse.....11 degrees
Width (track centers) 10 feet	Elevation limits.....-4 to +15 degrees
Armor.....3.8 inches	Range.....16,410 yards
Maximum speed.....23 miles per hour	Rounds carried.....30 rounds
Cruising range.....156-100 miles	Armor penetration
Fording depth.....4.25 feet	550 yards.....6.18 inches
Secondary armament.....One 12.7-mm AAMG	
Engine.....V-12 cylinder, diesel	
	512 hp at 2,000 rpm



122MM SELF-PROPELLED GUN M-1943 (D-25 S) ON JSU-122

122-mm SELF PROPELLED GUN M1943 (D-25S) ON JSU-122

This is basically the 122-mm tank gun M1943 (D-25S), used on all Soviet JS heavy tanks, but here adapted for use as an assault artillery piece. It is ballistically identical with the tank-mounted version but is slightly shorter and with lower muzzle velocity than the 122-mm self-propelled gun M1944 (A-19S).

The JSU-122 (D-25S) consists of this adapted tank gun mounted on the chassis of the JS heavy tank, with the same type of superstructure as the JSU-122 (A-19S) and JSU-152. Although almost identical to the JSU-122 (A-19S), this SP can be visibly identified in that: (1) the gun is fitted with a double-baffle muzzle brake; and (2) the gun mantlet on the bottom is more rounded.

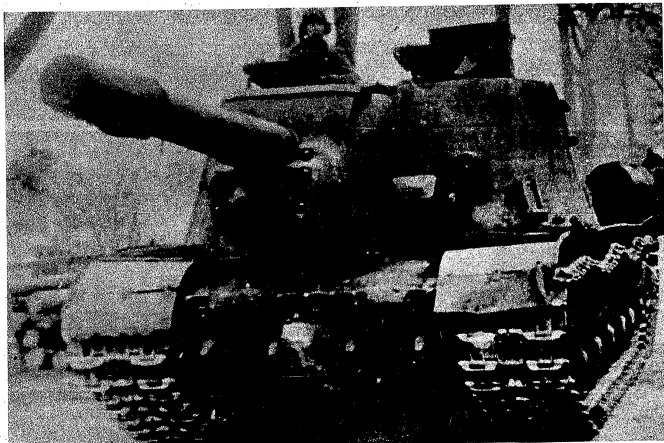
CHARACTERISTICS

Vehicle

Crew 5 men
 Weight 51.2 tons
 Width 10 feet
 Armor 3.6" front
 Maximum speed 23 mph
 Cruising range 156-180 miles
 Fording depth 4.25 feet
 Secondary armament .. One 12.7-mm AA MG
 Engine V-12 cyl; diesel;
 512 HP at 2000 rpm

Weapon

Primary armament One 122-mm Gun
 Traverse 11 degrees
 Elevation limits -4 to +15 degrees
 Range 16,410 yards
 No. of rounds carried 30 rounds
 Max. armor penetration 500 yards 5.9 inches



152MM SELF-PROPELLED GUN-HOWITZER M-1937

(ML-20S) ON JSU-152

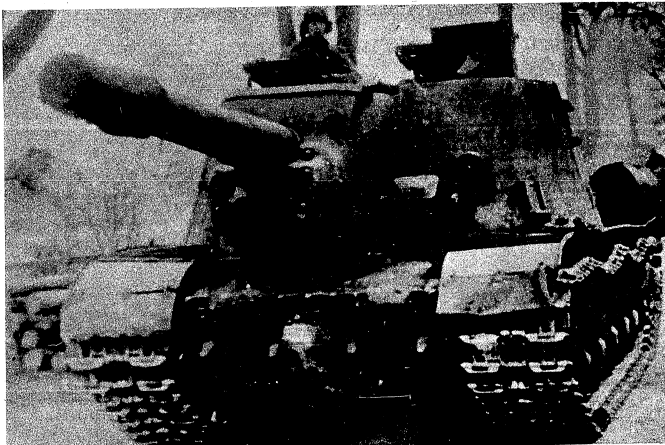
152-mm SELF-PROPELLED GUN-HOWITZER M1937
(ML-20S) ON JSU-152

This is the largest caliber self-propelled assault artillery piece in the Soviet Army. The weapon consists of the 152-mm gun-howitzer M1937 adapted to a self-propelled role by mounting it on the Joseph Stalin heavy tank chassis. It is readily distinguished from the JSU-122 (A-19S) and the JSU-122 (D-25S) by its 12-baffle muzzle brake and its larger caliber, howitzer-type tube.

It differs from an earlier version, mounted on a KV tank chassis and designated the SU-152, by having a somewhat higher and less sharply sloped superstructure.

CHARACTERISTICS

Vehicle		Weapon	
Crew.....	5 men	Primary armament.....	One 152-mm gun-howitzer
Weight.....	51 tons	Traverse.....	20 degrees
Width.....	10 feet	Elevation limits.....	3 to 420 degrees
Armor.....	4.0 inches	Range capability.....	18,880 yards
Maximum speed.....	23 miles per hour	Rounds carried.....	20 rounds
Cruising range.....	156-180 miles	Armor penetration	
Fording depth.....	4.25 inches (estimated)	500 yards.....	5.2 inches
Secondary armament.....	One 12.7-mm MG		
Engine.....	V-12 cylinders, diesel		
	592 hp at 2,000 rpm		



152MM SELF-PROPELLED GUN-HOWITZER M-1937

(ML-20S) ON JSU-152

152-mm SELF-PROPELLED GUN-HOWITZER M1937
(ML-20S) ON JSU-152

This is the largest caliber self-propelled assault artillery piece in the Soviet Army. The weapon consists of the 152-mm gun-howitzer M1937 adapted to a self-propelled role by mounting it on the Joseph Stalin heavy tank chassis. It is readily distinguished from the JSU-122 (A-19S) and the JSU-122 (D-25S) by its 12-baffle muzzle brake and its larger caliber, howitzer-type tube.

It differs from an earlier version, mounted on a KV tank chassis and designated the SU-152, by having a somewhat higher and less sharply sloped superstructure.

CHARACTERISTICS

Vehicle	Weapon
Crew.....5 men	Primary armament.....One 152-mm gun-howitzer
Weight.....51 tons	Traverse.....20 degrees
Width.....10 feet	Elevation limits.....3 to 20 degrees
Armor.....4.0 inches	Range capability.....16,880 yards
Maximum speed.....23 miles per hour	Rounds carried.....20 rounds
Cruising range.....156-180 miles	Armor penetration
Fording depth.....4.25 inches (estimated)	500 yards.....5.2 inches
Secondary armament.....One 12.7-mm MG	
Engine.....V-12 cylinders, diesel	
592 hp at 2,000 rpm	

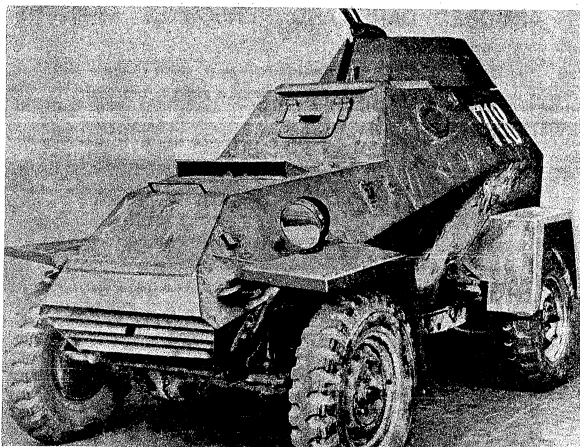
ARMORED CARS AND PERSONNEL CARRIERS

Prior to World War II, the chief Russian effort in the sphere of armored cars was in the direction of modifying and improving vehicles purchased from other countries.

Two armored cars that were developed during this period were the six wheeled BA-10 and the four wheeled BA-20. The former remained in service throughout World War II, the latter being substantially modified during 1943-44, and appeared in its new form under the name BA-64.

Since 1950, two new armored personnel carriers have made their appearance. They are multipurpose vehicles with a lightly armored body.

Detailed description of armored cars will be found on the following pages.



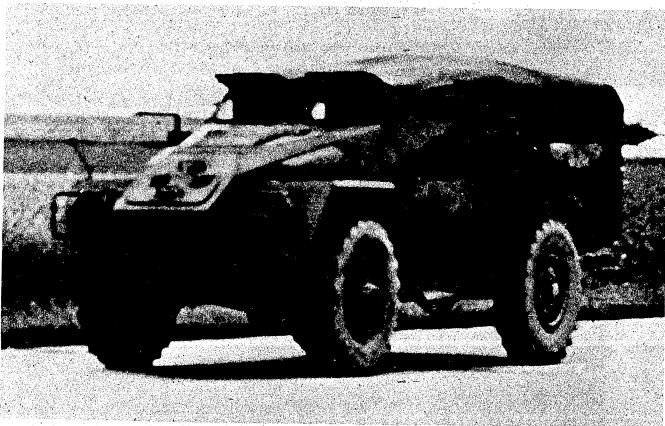
BA-64 ARMORED CAR

BA-64 ARMORED CAR

This is a World War II development which first saw service in 1943. The BA-64 armored car is a lightly armored, highly mobile vehicle. It can easily be recognized by its sloping sides and the small turret on the top rear. It is a 4 x 4, liquid cooled, gasoline powered vehicle. Provisions are made in the turret to mount a 7.62-mm DT or DTM light machine gun.

CHARACTERISTICS

Weight.....	5,280 pounds
Length.....	140 inches
Height.....	75 inches
Width.....	70 inches
Armor.....	0.59 inches
Maximum speed on surfaced roads.....	50 miles per hour
Cruising range.....	372 miles
Maximum fording depth.....	19 inches
Engine.....	50 HP, 4 cylinders, gasoline



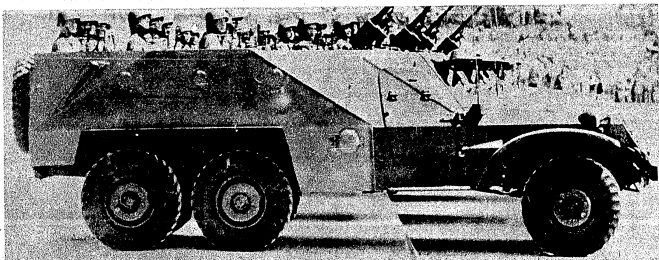
APC. 4X4 BTR-40

ARMORED PERSONNEL CARRIER BTR-40

This is a Soviet armored personnel carrier, which is very similar in design to the U.S. M3 scout car used in World War II. The BTR-40 is built on the chassis of the GAZ-63 truck. The body is of welded armor plate and open at the top. The interior of the vehicle is divided into the driver's section and the cargo section. The driver and the car commander enter through two doors on either side at the front. The personnel and/or cargo is loaded from two doors in the rear center. It has armor plate which contains two vision slots which cover the windshield when the vehicle is buttoned up. This radio equipped vehicle is used as a light personnel carrier and is sometimes found with machine guns mounted on it.

CHARACTERISTICS

Weight.....	11,600 pounds
Height.....	68.1 inches
Width.....	74.8 inches
Length.....	196.8 inches
Crew.....	2
Main armament.....	7.62-mm machine gun
Engine.....	78-80 HP, 6 cylinder,
	gasoline
Maximum speed.....	50 miles per hour
Range.....	177 miles



ARMORED PERSONNEL CARRIER BTR-152

ARMORED PERSONNEL CARRIER, BTR-152

This Soviet armored personnel carrier multipurpose armored vehicle was introduced in 1951. There is nothing very original in the design, but it does mark another step forward in the post-war re-equipment of the Soviet Army. Design features of the U.S. M3A1 and German World War II armored car Sd. Kfz. 231 obviously impressed the Soviets, since the new vehicle reflects features employed on both.

A versatile vehicle, it is employed as a personnel carrier, C&R vehicle, prime mover for mortars and light artillery, and a mount for heavy antiaircraft machine guns.

CHARACTERISTICS

Crew.....	2 plus 12
Weight.....	14,000 pounds (approximate)
Length, overall.....	265 inches
Height.....	79 inches
Width.....	50 inches
Armor thickness.....	From 1/4 to 5/8 inch
Horsepower.....	90 HP at 2,700 rpm
Engine.....	6 cylinders, in-line, gasoline

AMPHIBIOUS VEHICLES

During World War II the Soviet Army received several amphibious vehicles thru lend-lease from the United States.

Recently, the Soviets have added 4 new types of amphibious vehicles to their Army. The smallest of these being a 4 x 4 amphibious jeep, which is almost an exact copy of the amphibious jeep given to them thru lend-lease. They also have a 6 x 6 amphibious vehicle which is a slight modification of the U.S. 6 x 6 DUKW. The third and largest of these vehicles is a full tracked amphibian with a very large cargo space. The fourth of these vehicles is an amphibious tank.

Detailed descriptions of these vehicles are shown on the following pages.



AMPHIBIOUS JEEP

AMPHIBIOUS JEEP

This vehicle is almost an exact copy of the US Model used during World War II. This vehicle is 4 wheel drive. It uses a large 3 bladed propeller located in the middle of the rear of the vehicle for propulsion in water. The spare tire is mounted on the rear deck. It has a two section windshield. The top is canvas, with curtains which cover the sides of the passenger compartment. There are two headlights and a ventilating hatch mounted on the front deck.

CHARACTERISTICS

Weight	4460 pounds
Length	191 inches
Width	64 inches
Height	69 inches
Speed: Land	60 mph
Water	3.5 mph
Engine	6 cyl GAZ
Payload cargo	800 pounds
Passengers	4
Ground clearance	12 inches



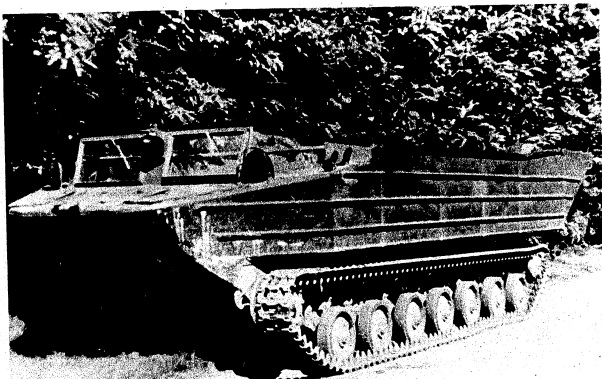
6X6 WHEELED AMPHIBIAN

6 x 6 WHEELED AMPHIBIAN

This is a copy of the US 6 x 6 amphibious vehicle which was used during World War II. The Soviets have made a small number of modifications on this vehicle. The rear of the vehicle has been extended giving a larger cargo space and a large tail gate added. It has 3 axles with power going to all three. Water propulsion is by a large 3 bladed propeller located in the center at the rear of the vehicle. The cargo space is usually covered with a canvas.

CHARACTERISTICS

Weight	15,000 pounds
Length	372 inches
Height	106 inches
Width	96 inches
Length of bed	120 inches
Engine	6 cyl. 218
Horsepower	110
Speed: Land	30 mph
Water	6.5 mph
Payload Cargo	7000 pounds
Passengers	20-30



FULL TRACKED AMPHIBIOUS CARGO VEHICLE

This is the largest of the Soviet amphibious vehicles. It has seven road wheels and seven return rollers. The suspension system is torsion bar. The front is very blunt. The driver's compartment is located very far forward. It has a two section windshield with two headlights located at each end and a spotlight in the center. This vehicle has a very large cargo space with a large tail gate which can be lowered and used as a loading ramp. There are two exhaust pipes which extend upward from the deck just to the rear of the driver's compartment on the left side of the vehicle. This vehicle has two large three bladed screws mounted in the rear of the vehicle for water propulsion.

CHARACTERISTICS

Weight	12,000 pounds
Length	360 inches
Height	84 inches
Width	144 inches
Length of bed	216 inches
Speed: Land	25 mph
Water	11.5 mph
Payload cargo	10 - 14,000 pounds
Passengers	25



AMPHIBIOUS TANK

AMPHIBIOUS TANK

The outward appearance of this vehicle is typical of most amphibious vehicles having the usual pointed bow and stern. The hull is a little higher in the rear than in the front. On the left side of the deck, just rearward of the turret, are two large grills. The drivers hatch is located in the center of the front deck just forward of the turret. The suspension system is christie type with six roadwheels and the drive sprocket located in the rear. The turret is round, dome shaped, with a large oval hatch in the center.

CHARACTERISTICS

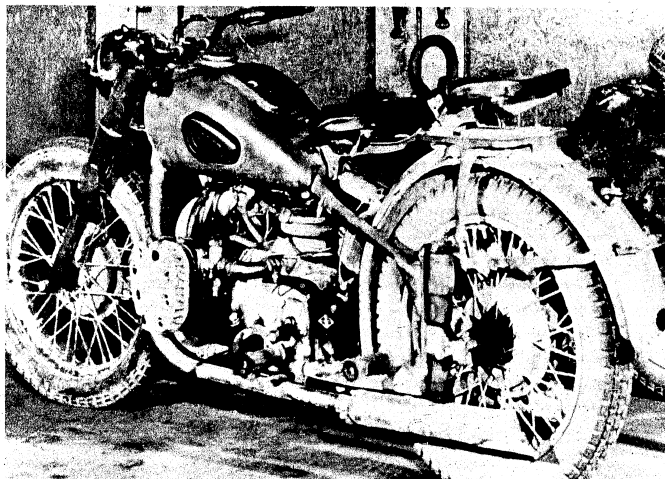
Weight	20 tons
Height	84 inches
Width	126 inches
Length	265 inches
Number of crew	4
Main armament	76-mm
Secondary armament	7.62-mm MG
Type of suspension	Christie
No. of roadwheels.....	6
Engine	Diesel
Speed: Land.....	25 mph
Water	6 mph
Track width	12 inches
Cruising range	175 miles
Ammunition for main armament	40 rds.

TRANSPORTATION VEHICLES

Soviet transportation vehicles have always been influenced greatly by foreign, and especially United States, design. The Soviets, in designing automotive equipment to satisfy specific military requirements, analyze equipment developed by other nations, and utilize as much of the design as they consider necessary to fulfill their requirements.

Vehicles received under lend-lease gave the Soviets their first large-scale access to advanced United States and British designs and provided a sharp impetus to the modernization of their automotive industry. Shortly after the flow of lend-lease equipment commenced in 1942, a wide-scale testing program was begun by the Soviets. All types of automotive equipment were subjected to the most exhaustive tests and analyses, the performance and characteristics of vehicles were compared, and recommendations for future Soviet requirements were made. Another important result of World War II was the introduction into the Soviet Army of a system of preventive maintenance.

Detailed descriptions of Soviet transportation vehicles are presented on the following pages.



MOTORCYCLE M-72

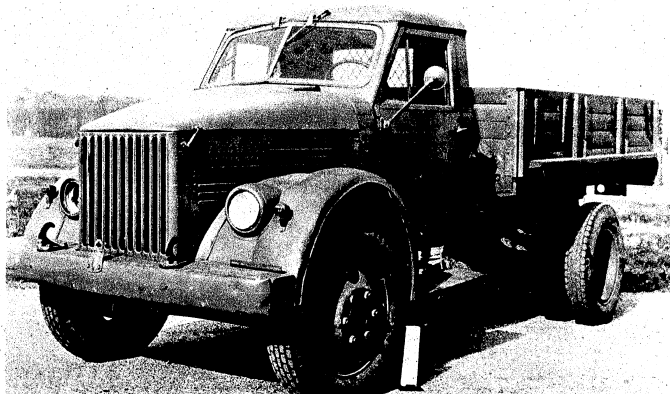
MOTORCYCLE M-72

A variety of motorcycles is produced in the U.S.S.R., all of which have military potentialities. The type most widely employed in the Soviet Army is the M-72, a copy of the pre-World War II German BMW-R-71, with only minor changes effected. May be found in use with or without sidecar. A 7.62-mm DPM light machine gun is normally mounted on the front of the sidecar when sidecar is used.

It appears that the Soviets have placed considerable emphasis on the motorcycle since World War II as a fast and economical means of transportation. The M-72 will be found engaged in the following roles in the Soviet Army: reconnaissance, messenger service, police operations, convoy control, and as security with armored units.

CHARACTERISTICS

Weight.....	496 pounds solo
Wheelbase.....	55 inches
Engine.....	2 cylinders, opposed, air cooled
Horsepower.....	22 HP at 4,500 rpm
Maximum speed.....	69 miles per hour
Fuel capacity.....	5.5 gallons
Cruising range.....	186 miles



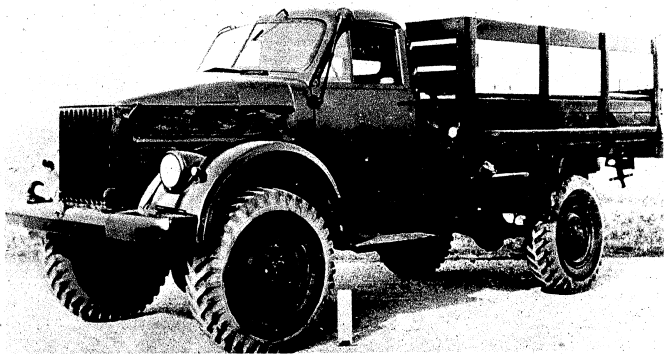
TRUCK, CARGO, 4X2, GAZ-51

TRUCK, CARGO, 4x2, GAZ-51

The GAZ-51 is a widely used vehicle in the Soviet Army. In addition to its normal cargo carrying role, it is utilized as a personnel carrier and as a prime mover for light artillery pieces. It is powered by a six cylinder, in-line, liquid cooled, "L" head engine, developing 70 horsepower, with a cruising range of 260 miles.

CHARACTERISTICS

Weight.....	5,974 pounds
Wheelbase.....	130 inches
Length, overall.....	237 inches
Weight, overall.....	83.8 inches
Width.....	86.5 inches
Horsepower.....	70 HP at 2,800 rpm
Type fuel.....	Gasoline
Fuel capacity.....	27.7 gallons
Maximum speed.....	43 miles per hour
Payload.....	2.75 tons



TRUCK CARGO, 4X4, GAZ-63

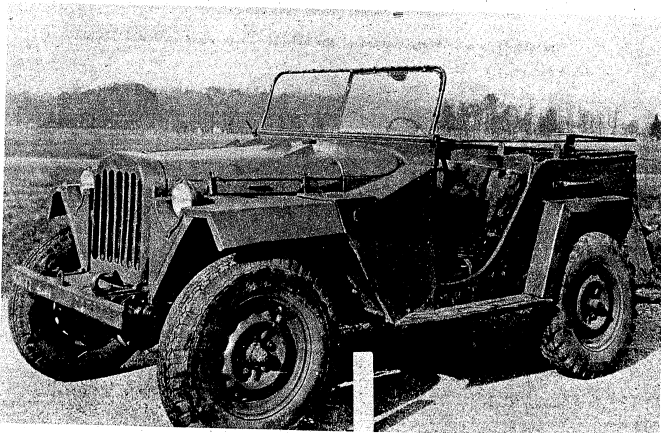
TRUCK, CARGO, 4x4, GAZ-63

The GAZ-63 is a military version of the GAZ-51. It is provided with all-wheel drive for greater trafficability.

It has an open body and is found both in dump and cargo versions. A power take-off and winch are mounted on the front. Important features include a motor preheater to facilitate ease of starting in extreme cold. The GAZ-63 is powered by a liquid cooled, six cylinder, in-line, "L" head engine developing 70 horsepower. It is reported to have an operational range of 485 miles.

CHARACTERISTICS

Weight.....	7,202 pounds
Wheelbase.....	130 inches
Length, overall.....	217 inches
Height, overall.....	86 inches
Width.....	86.6 inches
Horsepower.....	70 HP at 2,800 rpm
Type fuel.....	Gasoline
Fuel capacity.....	51.5 gallons
Maximum speed.....	40 miles per hour
Payload.....	2.2 tons



TRUCK, 4X4, GAZ-67B

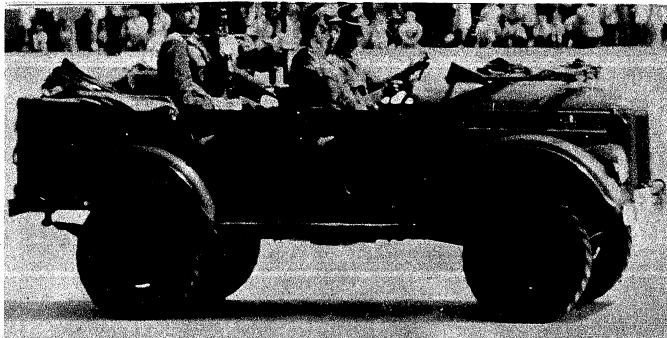
TRUCK, 4x4, GAZ-67B

The GAZ-67B is the Soviet counterpart of the US truck, 1/4 ton, 4x4, C&R, commonly known as the Soviet "jeep." It is slightly heavier than the US jeep and was developed from the Soviet version of the Model "A" Ford.

This is a light, open four passenger car powered by a conventional four cylinder, liquid cooled, "I" head engine developing 54 horsepower. The GAZ-67B is easily recognized by its high fenders, which angle out from the body of the vehicle. This vehicle is found in large numbers in the Soviet Army.

CHARACTERISTICS

Weight.....	2,910 pounds
Wheelbase.....	63 inches
Length, overall.....	132 inches
Height, overall.....	67 inches
Width.....	66.5 inches
Horsepower.....	54 HP at 2,800 rpm
Type fuel.....	Gasoline
Fuel capacity.....	18.5 gallons
Maximum speed.....	56 miles per hour
Payload.....	882 pounds (4 persons)



TRUCK, 4 X 4, GAZ - 69A

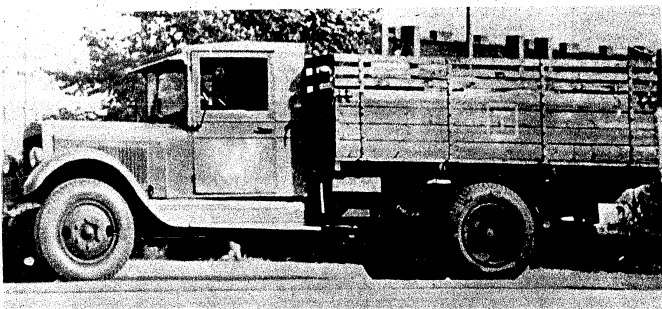
TRUCK, 4x4, GAZ-69

The GAZ-69 is a newly designed vehicle recently introduced to supplement the GAZ-67B as the Soviet "jeep." Most of the deficiencies of the GAZ-67B, such as low ground clearance, excessive use of lubricants, and difficulty of assembling and disassembling have been corrected in this new vehicle. The GAZ-69 is somewhat heavier than the GAZ-67B, with a slight increase in horsepower. It is powered by a four cylinder, liquid cooled, "L" head engine developing 55 horsepower.

There are two versions of this vehicle, a five passenger, four door CAR model, and an eight passenger truck model, seating two persons in front and three persons along each side in the rear.

CHARACTERISTICS

<u>5 Passenger</u>	<u>8 Passenger</u>
Weight.....3,380 pounds	.....3,360 pounds
Wheelbase.....90.5 inches	.....90.5 inches
Length, overall.....152 inches	.....152 inches
Height, overall.....73 inches	.....80 inches
Width.....69 inches	.....73 inches
Horsepower.....55	.....55
Type fuel.....Gasoline	.....Gasoline
Fuel capacity.....56 gallons	.....56 gallons
Maximum speed.....56 miles per hour	.....56 miles per hour
Payload.....990 pounds	.....1,100 pounds



TRUCK, CARGO, 4 X 2, ZIS-5

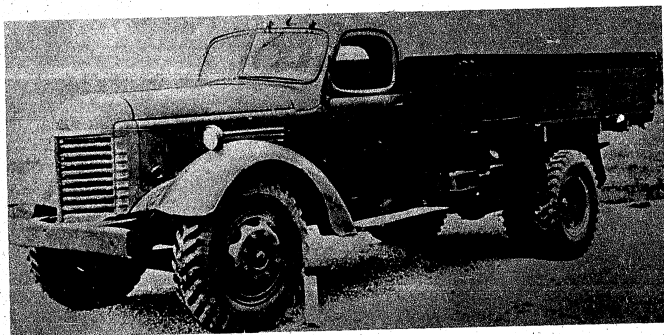
TRUCK, CARGO, 4x2, ZIS-5

The ZIS-5 is of pre-World War II origin, first being produced in 1933, and is based on the US autocar. Since it has only rear wheel drive, its value as a military vehicle is questionable as its operation is restricted to rather smooth terrain or paved roads.

Recognition features are dual rear wheels, square cab, and open body. A 73 horsepower, six cylinder, in-line, "L" head engine powers this vehicle. Cruising range is reported to be only 110 miles. The production of the ZIS-5 was discontinued in 1950.

CHARACTERISTICS

Weight.....	6,834 pounds
Wheelbase.....	150 inches
Length, overall.....	238 inches
Height, overall.....	85 inches
Width.....	68 inches
Horsepower.....	71 HP at 2,300 rpm
Type fuel.....	Gasoline
Fuel capacity.....	15.9 gallons
Maximum speed.....	37 miles per hour
Payload.....	3.5 tons



TRUCK, CARGO 4X2 ZIS-150

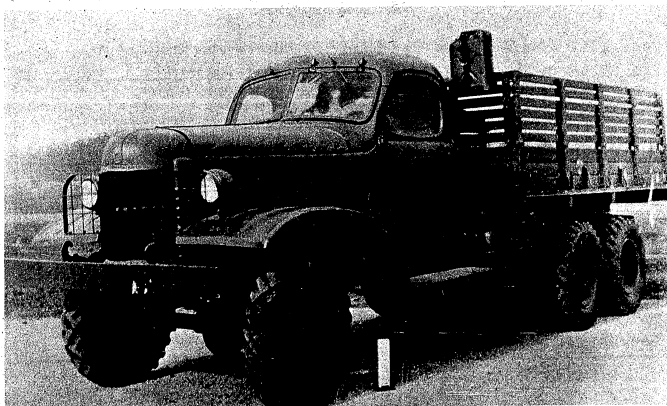
TRUCK, CARGO, 4x2, ZIS-150

The ZIS-150 is used by the Soviets primarily as a cargo carrier, and the design is based on the US Army International five ton, 4x2 truck.

The engine consists of a liquid cooled, six cylinder, in-line, "I" head engine, with a reported horsepower output of 90. The chassis of this vehicle has also been reported as being used for special purpose vehicles. Recognition feature is its close resemblance to the US International Harvester trucks.

CHARACTERISTICS

Weight.....	8,598 pounds
Wheelbase.....	158 inches
Length, overall.....	265 inches
Height, overall.....	85 inches
Width.....	93.6 inches
Horsepower.....	90 HP at 2,700 rpm
Type fuel.....	Gasoline
Fuel capacity.....	40 gallons
Maximum speed.....	38.5 miles per hour
Payload.....	4.4 tons



TRUCK, CARGO, 6X6, ZIS-151

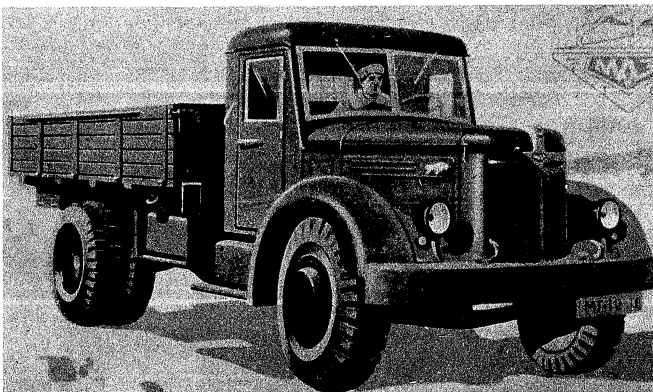
TRUCK, CARGO, 6x6, ZIS-151

This is one of the latest trucks to be issued to Soviet Army units. It is an all wheel drive vehicle which is often used as a prime mover for divisional artillery pieces, antiaircraft guns, antitank guns, and the 160-mm mortar.

The ZIS-151 is an open body cargo truck, and is powered by the ZIS-121 six cylinder, liquid cooled, in-line, gasoline engine. This is the standard chassis upon which most special purpose bodies are mounted.

CHARACTERISTICS

Weight.....	12,000 pounds
Wheelbase.....	166 inches
Length, overall.....	273 inches
Height, overall.....	106 inches
Width.....	91 inches
Horsepower.....	90 HP at 2,700 rpm
Fuel capacity.....	79 gallons
Maximum speed.....	41 miles per hour
Payload.....	5.0 tons



TRUCK, CARGO, 4X2, MAZ-200

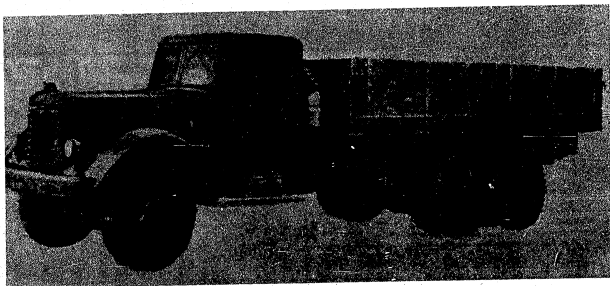
TRUCK, CARGO, 4x2, MAZ-200

The MAZ-200 cargo truck, manufactured at the Minsk Automobile Plant, is designed to carry loads of five to seven tons, depending on terrain or road surfaces. The truck is powered by a four cylinder, two cycle diesel engine employing a Roots-type blower, and develops 112 brake horsepower at 2,000 rpm.

Basically, this same type of truck is manufactured at the Yaroslavl Automobile Plant and is known as the YaAZ-200. The only difference between these two trucks being the design of the engine hood and grill and driver's cab or compartment. For recognition purposes, the MAZ-200 can easily be identified by the vertical engine grill, while on the YaAZ-200 this grill runs horizontal.

CHARACTERISTICS

Weight.....	14,230 pounds
Wheelbase.....	168 inches
Length, overall.....	300 inches
Height.....	96 inches
Width.....	110 inches
Horsepower.....	110 HP at 2,000 rpm
Type fuel.....	Diesel
Fuel capacity.....	49.5 gallons
Maximum speed.....	37 miles per hour
Payload.....	8 tons
Towing capacity.....	Trailer up to 10 tons



TRUCK, YAAZ-210 SERIES (CARGO AND TRUCK-TRACTOR)

TRUCK, YAAZ-210 SERIES (CARGO AND TRUCK TRACTOR)

The YAAZ-210 series truck is produced presently in five models, the 210, 210A, 210D, 210E, and 210G. Of these, the 210E is not considered a military vehicle because its primary role is hauling earth, rock, etc. for civil construction.

The YAAZ 210 and 210A are heavy cargo trucks, while the 210D and 210G are tractor prime movers.

CHARACTERISTICS

	<u>210 6x4</u>	<u>210A 6x4</u>	<u>210D 6x4</u>	<u>210G 6x4</u>
Weight (pounds).....	23,368	24,250	21,913	25,617
Wheelbase (inches).....	226	226	226	188
Length (inches).....	374	374	290	290
Height (inches).....	100	100	102	102
Width (inches).....	104	104	103	104
Horsepower (2,000 rpm).....	168	168	215	215
Type fuel.....	Diesel	Diesel	Diesel	Diesel
Speed (miles per hour).....	34.2	34.2	28	28
Payload (pounds).....	26,455	26,455	57,000	57,000

PRIME MOVERS

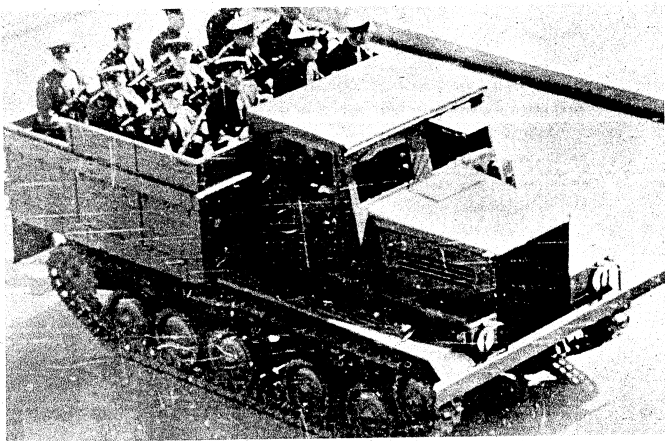
During World War II, the Soviet Army used caterpillar type tractors as prime movers for their heavy artillery. These tractors were very slow.

Since World War II, the Soviets have introduced into their army a complete new line of prime movers. The new prime movers are all full tracked and much faster than any that they ever had before. Most of these vehicles are powered with Diesel engines.

They range from the light, with a draw bar capacity of five tons, to the large heavy one with a draw bar capacity of 30 to 35 tons.

The prime movers are used to tow light to heavy antiaircraft artillery and field artillery.

Detailed descriptions of these vehicles are shown on the following pages.



PRIME MOVER M-2

PRIME MOVER M-2

The M-2 is classified as a light prime mover. This vehicle has torsion bar suspension with five road wheels and three support rollers. The largest distance between the road wheels being between the second and third. The drive sprocket is located in the rear. This vehicle has a very small wooden bed for carrying cargo. The rear of the box has a double door for entrance into the cargo space. The cab on the M-2 is a rather small box looking affair with a very flat roof, and has two doors, one on each side for entrance. There are two sections to the windshield. The radiator grill is rather large and square with horizontal channeling. It is used to tow heavy mortars and medium artillery howitzers.

CHARACTERISTICS

Weight.....	20,460 pounds
Length.....	192 inches
Height.....	86 inches
Width.....	53 inches
Length of bed.....	108 inches
Draw bar capacity.....	8,360 pounds
Payload.....	2,860 pounds
Engine.....	1a&2 204B Diesel
Passengers.....	12 persons



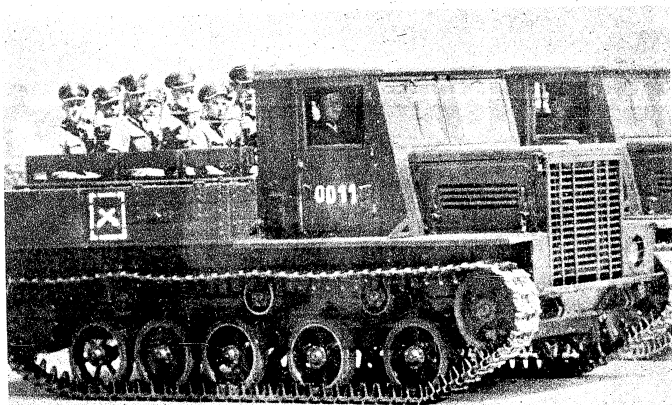
YA-14 PRIME MOVER

YA-14 PRIME MOVER

This is a light prime mover. The YA-14 is a full tracked vehicle having six road wheels and three return rollers. The drive sprocket is located in the front. The top of the track has a very definite slope from front to rear. The cab resembles that of a truck cab. It has a three section windshield, one large section on each side with a very narrow section in the center. The hood has two rows of ventilating slots on each side. The cargo space is very small with two doors in the middle of the rear for access into it. This vehicle is used to tow light and medium antiaircraft artillery.

CHARACTERISTICS

Weight.....	18,000 pounds
Draw bar capacity.....	14,000 pounds
Length.....	100 inches
Width.....	56 inches
Length of bed.....	90 inches
Height.....	90 inches
Number of road wheels.....	6
Type of suspension.....	Torsion bar
Width of track.....	11.8 inches
Payload cargo.....	6,000 pounds
Passengers.....	12

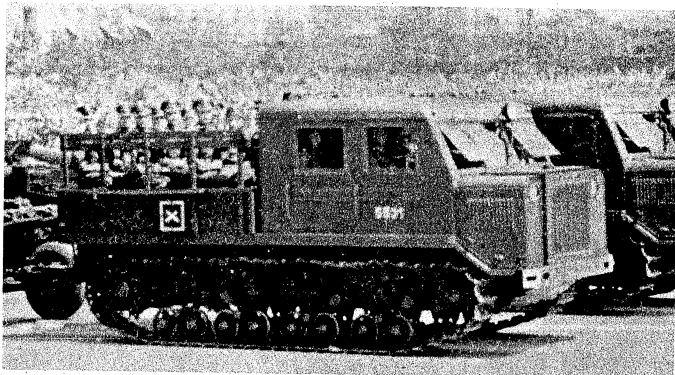


YA 12 OR 13 PRIME MOVER

YA-12 AND YA-13 PRIME MOVER

These two vehicles are exactly the same from the outer appearance. Both are full tracked, each having five road wheels and three support rollers. The greatest spacing between the road wheels is between the first and second road wheels. Both have torsion bar suspension. The hood on these is rather short and square. The cab is box shaped with one door on each side and a two section windshield. The bed is rather small with very low sides and is covered with a removable canvas cover. The only difference in these two vehicles is the engine. The YA-12 has a diesel engine and the YA-13 has a gasoline engine.

CHARACTERISTICS		
	YA-12	YA-13
Weight.....	18,700 pounds	16,940 pounds
Draw bar capacity.....	17,600 pounds	11,000 pounds
Length.....	192 inches	192 inches
Height.....	87 inches	87 inches
Width.....	94 inches	94 inches
Length of bed.....	108 inches	108 inches
Number of road wheels.....	5	5
Engine.....	Diesel	Gasoline
Horsepower.....	110	95
Payload cargo.....	6,600 pounds	4,400 pounds
Passengers.....	12	12
Width of truck.....	11.8 inches	11.8 inches
Speeds: hard surfaced.....	23 miles per hour	15 miles per hour
cross-country.....	10 miles per hour	5 miles per hour



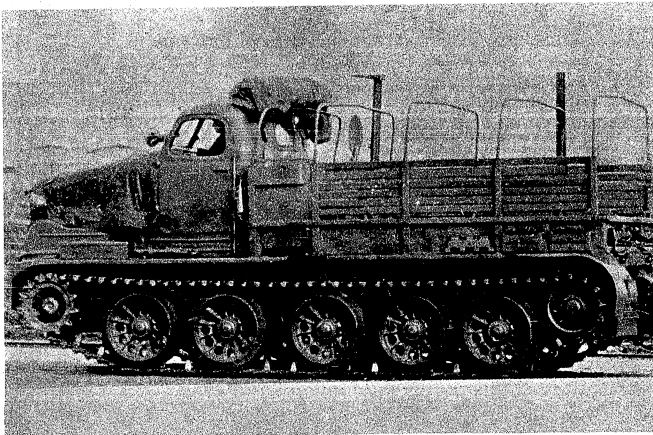
TRACKED PRIME MOVER M-1954

TRACKED PRIME MOVER M1954

This vehicle is classified as a heavy prime mover. It has a very box like appearance when viewed from the front. The hood is very short and has a very large cab, with two seats extending the width of the cab. It has two doors on each side and a three section windshield. The cargo space is rather small for such a large vehicle. The suspension system is rather peculiar, having eight road wheels with four support rollers. It is believed to be torsion bar with an arm attached to the end of crank which mounts two small road wheels in tandem. The drive sprocket is located in the rear of the vehicle. This vehicle is used for towing medium artillery.

CHARACTERISTICS

Weight.....	20,000 to 24,000 pounds
Length.....	228 inches
Height.....	120 inches
Width.....	108 inches
Length of bed.....	120 inches
Draw bar capacity.....	30,000 pounds
Payload.....	1,000 pounds
Engine.....	Diesel (?)
Passengers.....	20 persons



FULL TRACKED PRIME MOVER M-1950

FULL TRACKED PRIME MOVER M1950

This is the largest of the prime movers used by the Soviets. This prime mover is a truck type body mounted on a T34 tank chassis. It has five road wheels. The largest space between the road wheels being between the second and third roadwheels. This vehicle has christie type suspension. The drive sprocket is located in the front of the wheels. It has a very wide cab with three section windshield, and a winch located underneath the body with the cable extending to the rear. This prime mover has a very large cargo space. The exhaust is located about the middle of the vehicle on each side. This is used to tow medium and heavy AA and artillery pieces.

CHARACTERISTICS

Weight.....	3000 pounds
Length.....	240 inches
Height.....	104 inches
Width	112 inches
Length of Bed.....	138 inches
Draw Bar Capacity.....	60 to 70,000 pounds
Payload.....	10 to 14,000 pounds
Engine.....	Diesel V2
Passengers.....	25 to 30 persons

GLOSSARY

ENGLISH	GERMAN	RUSSIAN
AIR VENTILATOR	LUFT VENTILATOR	ВОЗДУШНЫЙ ВЕНТИЛЯТОР
ALMOST VERTICAL TURRET SIDES	FAST GERADE SEITEN DES PANZER- KASTENAUFBAUS	ПОЧТИ ВЕРТИКАЛЬНЫЕ БОКА БАШНИ
APERTURE	DIOPTER	СТЕРЕСТИЕ
ARMORED CAR	PANZERWAGEN	БРОНЕВОЙ АВТОМОБИЛЬ
ARMORED REARWARD SLOPING GRILLE	NACH HINTEN LAUFENDE KUGEL- SICHERE KUEHLERVERKLEIDUNG	БРОНИРОВАННАЯ ОБРАТНАЯ СКАТНАЯ РЕШЕТКА
ARMORED TRANSPORTER	SCHUTZENPANZERWAGEN	БРОНЕТРАНСПОРТ
ANTI-AIRCRAFT GUN	FLUGZEUGABWEHRKANONE (FLAK)	ЗЕНИТНАЯ ПУШКА
ANTI-AIRCRAFT MACHINEGUN	FLAK MASCHINENGEWEHR	ЗЕНИТНЫЙ ПЛЕМЕТ
ANTI-TANK GUN	PANZERABWEHRKANONE (PAK)	ПРОТИВОТАНКОВАЯ ПУШКА
AUTOMATIC ACTION	AUTOMATISCHE BETÄTIGUNG	АВТОМАТИЧЕСКОЕ ДЕЙСТВИЕ
AUTOMATIC ANTI-AIRCRAFT GUN	AUTOMATISCHE FLUGZEUG- ABWEHRKANONE	АВТОМАТИЧЕСКОЕ ЗЕНИТНОЕ ОРУДИЕ
BALL AND SOCKET JOINT	GELSENKVERBINDUNG	ШАРНИРНОЕ СОЕДИНЕНИЕ
BALL MOUNTED MACHINEGUN	MASCHINENGEWEHR IN KUGEL- BLEHDE	ШАРОВАЯ УСТАНОВКА (ТАНКОВОГО ПЛЕМЕТА)
BARLEYCORN	GERSTENKORN	БОРИНКОРН МУШКА

BARREL	LAUF ODER ROHR	СТВОЛО
BARREL JACKET	LAUF GEHÜSE	КОЖУХ СТВОЛА
BASE CAP	BODENVerschraubung	ОПОРНЫЙ КОЛПАЧОК
BASEPLATE	BODENPLATE	ОПОРНАЯ ПЛИТА
BATTERY	BATTERIE	БАТАРЕЯ
BELTED	PATRONE MIT EXTRA ANSATZ UEBER DEN HUELSEN RAND	БЕСПАМПОЧНАЯ ГИЛЬЗА С ОПОРНЫМ БУРТИКОМ
BELT FEED	GURTZUFUEHRUNG	ПОДАЧА ПАТРОНОВ ЛЕНТОЙ
BIPOD	ZWEIBEIN	СОПКА
BIPOD LOCK	ZWEIBEIN SCHLOSS	ЗАКЛЮЧЕНИЕ СОПКИ
BLADE	MESSERKORN	ЛЕЗВИЕ
BODY	KORPER	КОРПУС
BOLT	VERSCHLUS	ЗАТВОР
BOLT ACTION	KAMMER AM GEMEHR	ДЕЙСТВИЕ ЗАТВОРА
BOLTED	GESCHRAUBT	СБОЛЧЕННЫЙ
BOLT HANDLE	KAMMERSTUENDEL	РУКОЯТКА ЗАТВОРА
BORE	ROHRSTIEL	КАНАЛ СТВОЛА
BOX MAGAZINE	STANGENMAGAZIN	МАГАЗИН КОРОБЧАТОГО ТИПА
BOX TRAIL	KASTENLAFFETE	КОРОБЧАТЫЙ ХВОСТ

BOX OR TUBULAR SPLIT TRAIL	KASTEN ODER ROHR SPREITZLAFFETE	КОРОБЧАТЫЙ ИЛИ ТРУБЧАТЫЙ ХВОСТ ЛАФЕТА С РАЗДЕЛНЫМИ СТАНИНАМИ
BREECH	LADERAUM	ЗАТВОР
BREECHLOCK	QUERVERSCHLUSS	ЗАТВОР (ЗАТВОРНЫЙ КЛИН)
BREECHLOCK CARRIER	VERSCHLUSSTRAEGER	РАМА ЗАТВОРА
BREECHING	BODENRING	КАЗЕННИК
BULLET	GESCHOSS	ПУЛЯ
CARBINE	KARABINER	КАРАБИН
CARGO TRUCK	LASTKRAFTWAGEN	ГРУЗОВИК
CARRYING HANDLE	TRAGEGRIF	РУЧКА ДЛЯ ПЕРЕНОСИ
CARRYING HANDLE AND QUICK CHANGE BARREL LEVER	TRAGEGRIF UND LAUFWECHSELHEBEL	РУЧКА ДЛЯ ПЕРЕНОСИ И РЫЧАГ ДЛЯ БЫСТРОЙ ЗАМЕНЫ СТВОЛА
CARTRIDGE	PATRONE	ПАТРОН
CARTRIDGE CASE	PATRONENHUELSE	ГИЛЬЗА
CHAMBER	LADUNGSRAUM	КАМРА
CHARGING HANDLE	LADEGRIF	РУКОЯТКА ПЕРЕЗАРЯДКИ
CHEEK REST	BACKENSTUETZE	УПОР ДЛЯ ЩЕКИ
CIRCULAR BASEPLATE	RUNDE BODENPLATE	КРУГЛАЯ ОПОРНАЯ ПЛИТА

CIRCULAR PROJECTING
CLEANING ROD
CLEARANCE LIGHT
CLOSED CAB
COCKING AND FIRING
MECHANISM

COMMANDERS CUPOLA
COMMANDERS SQUARE CUPOLA

COMPENSATOR
CRADLE
CURVED BOX MAGAZINE

CURVED MANTLET
CYLINDER
CYLINDRICAL AUXILIARY
FUEL TANKS
CYLINDRICAL HEAD
CYLINDRICAL SHAPED BODY

HERVORSTEHENDER MANTEL
WISCHSTOCK ODER OSWERSTOCK
SEITENSCHRECKUNGSLAMPE
GESCHLOSSENES FÜHRERHAUS
SPANN UND FEUEREINRICHTUNG

KOMMANDANTENTURM
VIERECKIGER KOMMANDANTENTURM

KOMPENSATOR
ROHMWEGE
GEBOGENES STANIMMAGAZIN

GEBÜGelter MANTEL
ZYLINDER
RUNDZUSATZKRAFTSTOFF-
BEHÄLTNER
WALZENFORMIGER TOFF
WALZENFORMIGER KÖRPER

КОЛЬЦЕВОЙ ОТПИРАЮЩИЙ ВЫСТУП
ЩОППОЛ
ЗАБОРНАЯ ЛАМПА
ЗАКРЫТАЯ КАБИНА
МЕХАНИЗМ ДЛЯ ПОСТАНОВКИ НА
БОЕВОЙ ВЗВОД И УДАРНЫЙ
МЕХАНИЗМ
КОМАНДИРСКАЯ БАШНЯ
КОМАНДИРСКАЯ КВАДРАТНАЯ
БАШНЯ
КОМПЕНСАТОР
ЛЕНКА
КРИВОЙ МАГАЗИН КОРОВЧАТОГО
ТИПА
СТАВЕНЬ АМБРАЗУРЫ, МАНТИЯ
ЦИЛИНДР
ЦИЛИНДРИЧЕСКИЕ ДОПОЛНИТЕЛЬ-
НЫЕ ФАКИ ДЛЯ ГОРЮЧЕГО
ЦИЛИНДРИЧЕСКАЯ ГОЛОВКА
ЦИЛИНДРИЧЕСКИЙ КОРПУС

DEFENSIVE HAND GRENADE
DETACHABLE WHEELS
DOUBLE BAFFLE
DOUBLE BAFFLE MUZZLE BRAKE

DOUBLE BANK OF ROCKETS
DOUBLE BANK OF RAILS
DRIVERS HATCH
DRIVERS SLIT
DRIVE SHAFT
DRIVE SPROCKET
DRIVE SPROCKET, TOOTHED OR
ROLLER TYPE
DRUM MAGAZINE
DUAL MOUNT (AA)
DUAL WHEELS
DUAL WHEELS WITH SPONGE
RUBBER FILLED TIRES

SPRENKHANDGRANATE
ABMONTIERBARE RÄDER
DOPPELTE STAULOCHER
MÜNDUNGSBREMS MIT ZWEI
STAULOCHERN
DOPPELTE RAKETENREIHE
DOPPELSCHIENE FÜR RAKETEN
FAHREINSTUFIG
SCHNITTITZ
KARDANWELLE
ANTRIEBSRAD
ANTRIEBSRAD MIT ROLLEN
ODER ZAHNE
TROMMELMAGAZIN
FLACKZWILLING
ZWILLINGSREIFEN
SCHWAMMGUMMI GEFÜLLTE
ZWILLINGSREIFEN

ОБОРОНИТЕЛЬНАЯ РУЧНАЯ ГРАНАТА
ОТДЕЛЯЕМЫЕ КОЛЕСА
ДВОЙНОЙ ЗАМЕЛИТЕЛЬ ТЯГИ
ДВОЙНОЙ НАПРАВЛЯЮЩИЙ
ДУЛЬНЫЙ ТОРМОЗ
ДВОЙНОЙ РЯД РАКЕТ
ДВОЙНЫЕ РЕЛЬСЫ
ДВЕРЦА ВОДИТЕЛЯ
СМОТРОВАЯ ЦЕЛЬ ТАНКОВОДИТЕЛЯ
ВЕДУЩИЙ ВАЛ
ВЕДУЩЕЕ КОЛЕСА ТАНКА
ВЕДУЩЕЕ КОЛЕСА ТАНКА,
ЗУБЧАТОЕ ИЛИ ГЛАДКОЕ
ТЕСЬМА, ЛЕНТА
ДВОЙНАЯ УСТАНОВКА
ДВОЙНЫЕ КОЛЕСА
ДВОЙНЫЕ КОЛЕСА С ПИНАМИ НА-
ПОЛНЕННЫМИ ГУБЧАТОЙ РЕЗИНОЙ

EIGHT SLOT MUZZLE BRAKE	MUENDUNGSBREMSSE MIT ACHT STAULOESCHERN	ВОСЬМОЙ НАПРАВЛЯЮЩИЙ ДУЛЬНЫЙ ТОРМОЗ
EJECTION PORT	AUSWERFERAUSCHNITT	ОКНО ДЛЯ ВЫБРАСЫВАНИЯ ГИЛЬЗЫ
ELEVATING AND TRAVERSING HANDWHEELS	HANDRAEDER FUER HOEHEN UND SEITENRICHTANTRIEB	ПОД'ЕМНЫЕ И ПОВОРОТНЫЕ МАХОБЧУКИ
ELEVATING AND TRAVERSING MECHANISMS	HOEHEN UND SEITENRICHTWERK	ПОД'ЕМНЫЙ И ПОВОРОТНЫЙ МЕХАНИЗМ
ELEVATING HANDLE	GRIFF FUER HOEHENRICHTANTRIEB	РУКОВЯТКА ПЕРЕЗАРАДКИ
ELEVATING MECHANISM	HOEHENRICHTANTRIEB	ПОД'ЕМНЫЙ МЕХАНИЗМ
ELEVATING MECHANISM HOUSING	GERAETSE FUER HOEHENRICHTANTRIEB	КОРПУС ДЛЯ ПОД'ЕМНОГО МЕХАНИЗМА
EQUILIBRATORS	AUSGLEICHER	УРАВНОВЕШИВАЮЩИЙ МЕХАНИЗМ
EQUILIBRATORS SLOPE FORWARD	NACH VORN GEWINKELTE AUSGLEICHER	УРАВНОВЕШИВАЮЩИЙ МЕХАНИЗМ С ОТКЛОНОМ ВПЕРЕД
EQUILIBRATORS SLOPE REARWARD	NACH HINTEN GEWINKELTE AUSGLEICHER	УРАВНОВЕШИВАЮЩИЙ МЕХАНИЗМ С ОТКЛОНОМ НАЗАД
EXTERNAL CURVED	NACH AUSSEN GEBOGEN	ВНЕШНИЙ КРИВОЙ
EXTERNAL FLAT	FLACHER MANTEL	ВНЕШНИЙ ПЛОСКИЙ
EXTERNAL HAMMER	OFFENER HAHN	ВНЕШНИЙ МОЛОТОК

FABRIC OR METALLIC LINK BELT	STOFF ODER METALLKETT	МАТЕРЧАТАЯ ИЛИ МЕТАЛЛИЧЕСКАЯ ЛЕНТА
FIRING JACKS	FEUERSTUETZE	ОПОРНЫЕ ДОМКРАТЫ ОРУДИЙНОЙ УСТАНОВКИ
FIRING SHIELD	FEIERSCHUTZSCHILD	ОРУДИЙНЫЙ ЩИТ
FIVE DOUBLE RUBBER TIERED TRACK WHEELS	FUENF ZWILLINGS HARTGUMMI KETTENRAEDER	ПЯТЬ ГУСЕНИЧНЫХ КОЛЕС С ДВОЙНЫМИ РЕЗИНОВЫМИ ШИНАМИ
FIVE PASSENGER	FUENF PERSONEN	ПЯТЬ МЕСТ
FIXED, FOLDING OR DETACHABLE SPADES	FESTE, KLAEPBARER ODER ABMONTIERBARE SPATEN	ЗАФИКСИРОВАННЫЕ, СКЛАДЧАМЫЕ ИЛИ ОТДЕЛЯЕМЫЕ СОШНИКИ
FIXED OR FOLDING SPADES	FESTE ODER KLAEPBARER SPATEN	ЗАФИКСИРОВАННЫЕ ИЛИ СКЛАДНЫЕ СОШНИКИ С ОГРАНИЧИТЕЛЯМИ
FIXED RAISED SUPERSTRUCTURE	FESTER ERHOEBTER PANZERKASTEN OBERTEIL	ПРИПОДНЯТЫЙ КОРПУС
FIXED ROUND	FESTES RUNDGESCHUSS	УНИТАРНЫЙ ПАТРОН
FIXED SPADES	FESTE SPATEN	ЗАФИКСИРОВАННЫЕ СОШНИКИ
FLASH HIDER	MUENDUNGSPFEUERDAEMPFER	ПЛАМЕТАСИТЕЛЬ
FLAT, SLOPING FRONT PLATE	FLACH GENEIGTE FRONTPLATTE	ПЕРЕДНИЙ БРОНЕВОЙ ЛИСТ С НЕЗНАЧИТЕЛЬНЫМ НАКЛОНОМ
FLIP	FALTBARER KINN	ЛЕГКИЙ УДАР, ВЗМАХ

FOLDING SPADES
FOREEND GRIP
FOUR BANS OF ROCKETS
POINTING TO THE REAR IN
THE TRAVELLING POSITION
FOUR DOOR
FOUR PASSENGER
FOUR X TELESCOPIC SIGHT

FRAGMENTATION SLEEVE
FRONT SIGHT
FRONT SIGHT GUARD
FULL TRACKED CARRIAGE
FUZE COVER
GAS CYLINDER
GAS REGULATOR
GENERATOR
GLACIS PLATE
GLASS VISION BLOCKS

KLAPBARER SPATEN
VORDERER HANDGRIFF
VIER REIHEN VON RAKETEN
ZEIGEN WAEREND DES
TRANSPORTS NACH HINTEN
VIER TUREN
VIER PERSONEN
OPTIK MIT VIER FACHER
VERGROESSERUNG
SPLITTERMANTEL
KOEN
KORNSCHUTZ
VOLLSTETIG LAFETTE
ZUNDSCHUTZ
GAS ZYLINDER
GAS REGULATORSCHRAUBE
GENERATOR
FRONTANZERPLATTE
KUGELSICHERE GLASZEINSETZE

ОКЛАДНЫЕ СОШНИКИ
ЦЕБЕ
4 РЯДА РАКЕТ НАПРАВЛЕННЫХ
НАЗАД В ПОХОДНОМ ПОЛОЖЕНИИ

4 ДВЕРИ
ЧЕТЫРЕХМЕСТНЫЙ
4-х ТЕЛЕКОПИЧЕСКИЙ ПРИЦЕЛ

ОСКОЛОЧНАЯ МУФТА
МУФКА
НАМУШНИК
ПОЛНЫЙ ГИСУМНИЧНЫЙ ЛАФЕТ
КОМПАЧОН ВЗРЫВАТЕЛЯ
ГАЗОВЫЙ ЦИЛИНДР
ГАЗОВЫЙ РЕГУЛЯТОР
ГЕНЕРАТОР
ГЛАСИС
СТЕКЛЯНЫЕ СМОТРОВЫЕ ЦЕЛИ

GRADUATED LEAF REAR SIGHT

GRENADE
GRENADE LAUNCHER
GROOVED GUIDE RAIL
GROOVES
GUN
GUN AND MANTLET OFFSET TO
RIGHT
GUN CARRIAGE
HALF HATCH
HALF HATCHES
HAMMER
HAND OPERATOR
HANDGUARD
HANDLE
HANDRAILS
HARD RUBBER TIRES
HEAVY MACHINEGUN

RAHMENVISIER

GRANATE
GRANATENWERFER
FURCHEN FUEHRUNGSSCHINE
ZUEBE
KANONE, GEWEHR, GESCHUTZ
KANONE UND MANTEL AUSSER DER
MITTE NACH RECHTS
GESCHUTZTRABER
FLUEGEL DES EINSTEINSDRECKEL
GETEILTE EINSTEINSDRECKEL
HAHN
GENERATOR MIT HANDANTRIEB
HANDSCHUTZ
GRIF
HANDGELÄNDER
VOLLGUMMIREIFEN
SCHWERES MASCHINENGESCHÜTZ

КАЛИБРОВАННАЯ ЗАДНЯЯ
ПРИЦЕЛЬНАЯ ПЛАНКА
ГРАНАТА
РУЖЕЙНАЯ МОРТИРКА
РЕЛЬСЫ НАПРАВЛЯЮЩЕГО ПАЗА
НАРЕЗ
ПУШКА
ПУШКА И КРЫШКА СМЕЩЕННАЯ
НА ПРАВЫЙ БОК
ЛАФЕТ, ОРУДИННЫЙ ЛАФЕТ
ПОЛУДВЕРЦА
ПОЛУДВЕРЦЫ
МОЛОТ, МОЛОТОК
РУЧНОЙ ГЕНЕРАТОР
СТВОЛЬНАЯ НАКЛАДКА
РУЧКА
ПОРУЧНИ
ТВЕРДЫЕ РЕЗИНОВЫЕ ШИНЫ
СТАНКОВЫЙ ПУЛЕТЕТ

HELICAL HORIZONTAL	LIEGENDE SPIRALFEDER	СПИРАЛЬНЫЙ ГОРИЗОНТАЛЬНЫЙ
HELICAL VERTICAL	STEHENDE SPIRALFEDER	СПИРАЛЬНЫЙ ВЕРТИКАЛЬНЫЙ
HIGH FENDERS WHICH ANGLE OUT FROM BODY	HÖRNE NACH AUSSEN GEWINKELT	ВЫСОКОЕ КРЫЛО НА УГЛУ ИЗ ТЕЛА
HORIZONTAL SLIDING WEIGE	KOTFLIEßEL	ГОРИЗОНТАЛЬНЫЙ СПИРАТЕЛЬНЫЙ КЛИН
	WAGENSCHTER KEILVERSCHLUSS	ГОРИЗОНТАЛЬНЫЙ СПИРАТЕЛЬНЫЙ ВИТОК
HORIZONTAL VOLUTE	HORIZONTAL SPIRALFEDER AUS FLACHSTAHL	ГОРИЗОНТАЛЬНЫЙ СПИРАТЕЛЬНЫЙ ГАУБИЦА
HOWITZER	HAUBITZE	ДЛИННЕ ТАНКА
HULL FLOOR	BODENPLATE	НИЖНИЙ ЛИСТ ТАНКА
HULL FLOOR PLATE	BODENPLATE	ЗАДНИЙ ЛИСТ ТАНКА
HULL REAR PLATE	RÜCKENPLATE	ВЕРХНИЙ ЛИСТ ТАНКА
HULL ROOF PLATE	DECKPLATE	НАПРАВЛЯЮЩЕЕ КОЛЕСО
IDLER SPROCKET	LEITRAD	ВОСПЛАМЕНЯЮЩИЙ ПАТРОН
IGNITION CARTRIDGE	ZÜNDKER EINSATZ	ДОПОЛНИТЕЛЬНЫЙ ЗАРЯД
IMPLEMENTS	GEWÄHRADUNGEN	В БОЕВОМ ПОЛОЖЕНИИ 4 КОЛЕСА
IN FIRING POSITION, FOUR WHEELS REMAIN ON CARRIAGE	WENN IN FEUERSTELLUNG, VERBLEIBEN VIER RADDER AM GESTELL	НАХОДЯТСЯ НА СТАНКЕ
INTEGRAL BOX MAGAZINE	INTEGRIERENDES KASTENMAGAZIN	ИНТЕГРАЛЬНЫЙ МАГАЗИН КОРОБЧАТОГО ТИПА

INTERNAL	INNEN	ВНУТРЕННИЙ
INTERNAL COIL SPRING	INNEN VERDECKTE SPIRALFEDER	ВНУТРЕННЯЯ СПИРАЛЬНАЯ ПРУЖИНА
INTERRUPTED SCREW	SCHRAUBENVERSCHLUSS	ЗАТВОР С СЕКТОРНОЙ НАРЕЗКОЙ
BRACEHLOCK		ПОЛЕ НАРЕЗА И НАРЕЗ
LANDS AND GROOVES	FELDER UND ZUNGE	БОЛЬШАЯ ЦИЛИНДРИЧЕСКАЯ ГОЛОВКА
LARGE CYLINDRICAL HEAD	GROSSE WALZENFORMIGER KOPF	БОЛЬШИЕ ПРОСВЕРЛЕННЫЕ СТАЛЬНЫЕ КОЛЕСА
LARGE PERFORATED STEEL WHEELS	GROSSE DURCHLOCHERTE STAHLRADDER	БОЛЬШИЕ СТАЛЬНЫЕ ДИСКОВЫЕ КОЛЕСА С ШИНАМИ НАПОЛНЕННЫМИ ГУБЧАТОЙ РЕЗИНОЙ
LARGE STEEL DISC WHEELS WITH SPONGE RUBBER FILLED TIRES	GROSSE SCHEIBENRADDER MIT SCHWAMMUNTERGEFÜLLTEN REIFEN	РАМА ДЛЯ ПУСКА ВМЕСТО РЕЛЬСОВ
LAUNCHING FRAMES RATHER THAN RAILS	ABSCHUSSRAHMEN AN STELLE VON SCHIENEN	ПРИЦЕЛЬНАЯ РАМКА
LEAF	RAHMENVISIER	ДЛИНА ГУСЕНИЦЫ ПО ЗЕМЛЕ
LENGTH OF TRACK ON GROUND	LÄNGE DER KETTEN AM BODEN	ВЫРАБНВАЮЩИЕ ДОМКРАТЫ
LEVELLING JACKS	TRILERSAULE MIT STÜTZFLACH	

"L" HEAD OPPOSED CYLINDERS	SEITENGESTEUERTER BOXERMOTOR	ДВИГАТЕЛЬ С БОКОВЫМИ КЛАПАНАМИ С ПРОТИПОЛОЖНЫМИ ЦИЛИНДРАМИ
LIGHT MACHINEGUN	LEICHTES MASCHINENGESCHW.	ЛЕГКИЙ ПУЛЕМЕТ, РУЧНОЙ ПУЛЕМЕТ
LOADER-RAMMER MOTOR	LADE UND EINSCHIEBEMOTOR	ДОСЫЛАТЕЛЬ СНАРЯДА
LOADING GUIDE	LADEFUEHRUNG	СНАРЯДАТЕЛЬНАЯ НАПРАВЛЯЮЩАЯ
LOADING TRAY	LADESCHALE	ЛОТОК
LONG CYLINDRICAL TUBE	RUNDES LANGROHR	ДЛИННЫЙ ЦИЛИНДРИЧЕСКИЙ СТОЛ
LONG TUBE	LANGROHR	ДЛИННЫЙ СТОЛ
LONG TUBE WITH NO	LANGROHR OHNE	ДЛИННЫЙ СТОЛ БЕЗ ДУЛЬНОГО
MUZZLE BRAKE	MUENDUNGSEBREMSE	ТОРМОЗА
LOW DOME SHAPED TURRET	NIEDERER FLACHER PANZERTURM	НИЗКАЯ КУПОЛОБРАЗНАЯ БАШНЯ
LOWER FRONT PLATE	UNTERE FRONTPLATTE	НИЖНИЙ ПЕРЕДНИЙ ЛИСТ
MACHINEGUN	MASCHINENGESCHW.	ПУЛЕМЕТ
MACHINEGUN MOUNT	MASCHINENGESCHW. AUFBAU	ПУЛЕМЕТ "СТАНОК"
MAGAZINE FEED	MAGAZIN ZUFUEHRUNG	ПОДАЧА МАГАЗИНОМ
MAGAZINE CATCH	MAGAZINHALTER	ЗАПЕЛКА МАГАЗИНА
MAIN CHARGE	HAUPTLADUNG	РАЗРЫВНОЙ ЗАРЯД

METAL FOLDING STOCK	ZUSAMANKLAPPBARER	МЕТАЛЛИЧЕСКИЙ СЖИМАЮЩАЯ
METAL LAUNCHING FRAME	METALLGESCHW. KOLEEN	ПРИСОДА
	METALL ABSCHUSSRAHMEN	МЕТАЛЛИЧЕСКАЯ РАМА ДЛЯ ПУСКА РАКЕТ
METAL WHEELS WITH SOLID RUBBER OR SPONGE RUBBER FILLED TIRES	METALLRAEDER MIT VOLLGUMMI ODER SCHWAMMGUMMI GEFUELLTEN REIFEN	МЕТАЛЛИЧЕСКИЕ КОЛЕСА С ТВЕРДЫМИ РЕЗИНОВЫМИ ШИНАМИ ИЛИ С ШИНАМИ НАПОЛНЕННЫМИ ГУБЧАТОЙ РЕЗИНОЙ
MORTAR	GRANATWERFER	МИННОМЕТ
MOTORCYCLE	MOTORRAD	МОТОЦИКЛ
MULTI-BAFFLE	MEHRERE STAULOEBEREN	ЗАМЕДЛИТЕЛЬ ТЯГИ ИЗ МНОГИХ ЭЛЕМЕНТОВ
MULTI-BAFFLE MUZZLE BRAKE	MUENDUNGSEBREMSE MIT MEHREREN STAULOEBEREN	НАПРАВЛЯЮЩИЙ ДУЛЬНЫЙ ТОРМОЗ ИЗ МНОГИХ ЭЛЕМЕНТОВ
MULTIPLE ROCKET LAUNCHER	VIKELFACHER RAKETENWERFER	РЕАКТИВНАЯ УСТАНОВКА МНОГИХ РАКЕТ
MUZZLE	MUENDUNG	ДУЛО
MUZZLE BRAKE	MUENDUNGSEBREMSE	ДУЛЬНЫЙ ТОРМОЗ
MUZZLE LOADED	VORDERLADER	ЗАРЯЖАЕМЫЙ С ДУЛА

NON-DETACHABLE WHEELS
OCTAGONAL OPEN TOPPED TURRET
OFFSET
OPERATING HANDLE
OPERATING LEVER
OPERATING SPRING HOUSING
OUTRIGGERS
OVERALL LENGTH
OVERLAPPING TRACK WHEELS
PANCAKE STYLE DRUM MAGAZINE
PEDESTAL
PERMANENT FOLDING DAYONET
PISTOL CARTRIDGE
PISTOL GRIP

NICHT ABMONTIERBARE RÄDER
ACHTECKIGER TURM OBEN OFFEN
SPLITTERGRANATE
AUSSER DEM MITTEL
LADERGRIF
LADERHEBEL
SCHLISSFEDERGRABENE
HOLME
GESAMTLÄNGE
ÜBERSCHNEIDENDE KETTEN-
RÄDER
FLACHES THROMELMAGAZIN
SOCKEL
KLAPPAHRES SEITENGEWEHR
PISTOLENPATRONE
PISTOLENGRIF

НЕСЪЕМНЫЕ КОЛЕСА
ВОСЬМИУГОЛЬНАЯ ОТКРЫТАЯ
БАШНЯ
ШТУРМОВАЯ РУЧНАЯ ГРАНАТА
СМЕЩЕНИЕ
РЫЧАГ (УПРАВЛЕНИЯ)
РУКОЯТКА ПЕРЕЗАРЯЖАНИЯ
КОРЫТКА ДЛЯ УПРАВЛЯЮЩЕЙ
ПРУЖИНЫ
СТОБИНА КРЕСТОВИНЫ
ОБЩАЯ ДЛИНА
ПЕРЕКРЫВАЮЩИЕСЯ ТУСЕННЫЕ
КОЛЕСА НА НАСЛОЖЕННЫХ ШИНАХ
БАРАБАНИН МАГАЗИН КОРОБ-
ЧАТОГО ТИПА
ОСНОВАНИЕ
СЛАДНОЙ ШТЫК
ПАТРОН ДЛЯ ПИСТОЛЕТА
ПИСТОЛЕТНАЯ РУКОЯТКА

PLATE INTERLOCKING
POST
POST TYPE FRONT SIGHT
PRIMER
PRIMER/DETOMATOR WELL
PROJECTILE
QUADRUPLE MOUNT (A&M)
QUARTER ELLIPTIC
QUICK CHANGE BARREL LEVER
RADIAL ARM AND DRUM
RADIAL COOLING FINS
RATE OF FIRE SELECTOR LEVER
REAR SIGHT
REARWARD SLOPING SHIELD

DELMANDERKLEPPEND
STEHENDES KORN
STEHENDES KORN
ZÜENDER
ZÜENDER MIT LADUNG
(SPRINGSATZ)
GESCHOSS
FLAK VIERLING
VIERTEL ELLIPTISCH
HEBEL ZUM LAUF WECHSEL
TROMMELVISIER
RINNE HUEHGRIPPEN
HABEL FÜR FEUERGESCHWIND-
IGKEITSEINSTELLUNG
VISIER
NACH HINTEN GEBOGENES SCHILD

ВЫСКИРОВА БРОНЕВАК ПЛИТ
(ЛИСТОВ)
СТОЙКА (МУШКА)
МУШКА ТИПА СТОЙКА
КАПСЕЛЬ
КАПСЕЛЬ ДЛЯ ДЕТОНАТОРА
СНАРЯД
ЧЕТЫРЕХДУЛЬНОЕ ОРУДИЕ
ЧЕТЫРЕХКОМПОНЕНТНОЕ
РЫЧАГ ВЫСТРОИ ЗАМЕНЫ СТВОЛА
ПРИЦЕЛЬНАЯ ПЛАНКА И
БАРАБАНИК
РЕБРИСТАЯ ПОВЕРХНОСТЬ
ДЛЯ ОХЛАЖДЕНИЯ
ПЕРЕВОДЧИК СКОРОСТИ ЦЕЛЕНИЯ
ЗАДНИЙ ПРИЦЕЛ
ШИТ С НАКЛОНОМ НАЗАД

RECEIVER	KASTEN	СТВОЛЬНАЯ КОРОБКА
RECEIVER LOCK	KASTENVERSCHLUSS	ЗАМОК СТОЛЬНОЙ КОРОБКИ
RECOIL AND RECUPERATOR	RUECKLAUFREMS UND	ПРОТИВООТКАТНЫЙ И НАКЛОННОЙ
MECHANISMS	VORHOLEREINRICHTUNG	МЕХАНИЗМ
RECOILLESS GUN	RUECKSTOSSFREIES GRSCHUETZ	БЕЗОТКАТНОЕ ОРУДИЕ
RECOIL MECHANISM	RUECKLAUFREMS	ПРОТИВООТКАТНЫЙ МЕХАНИЗМ
RECOIL MECHANISM HOUSED IN	RUECKLAUFREMS IN DER	ПРОТИВООТКАТНЫЙ МЕХАНИЗМ
CRADLE	HOWEWIE UNTERGERACHT	НАХОДЯЩИЙСЯ В ЛЕЖАКЕ
RECOIL MECHANISM HOUSED IN	RUECKLAUFREMS IM MANTEL	ПРОТИВООТКАТНЫЙ МЕХАНИЗМ
MANTLET	UNTERGERACHT	НАХОДЯЩИЙСЯ В СТАВНЕ
		АМБРАЗУРА
RECUPERATOR	HOHVORHOLER	НАКАТНИК
REINFORCED MUZZLE	VERSTAERKTES ROHRMUENDUNG	УСИЛЕННОЕ ДУЛО
RETRACTABLE STOCK	ZURUECKZIEHBARER OBWEHRKOLBEN	ОТДЕЛЬНЫЕ СОШНИКИ
RETRACTING JACKS	VOR UND RUECKZIEHSPINDEL	ВРАЩАЮЩИЕСЯ ДОМКРАТЫ
REVOLVER	REVOLVER	РЕВОЛЬВЕР
RIFLE	GEWHR	ВИНТОВКА
RIFLE CARTRIDGE	GEWHR PATRONE	ВИНТОВОЧНЫЙ ПАТРОН
RIFLE GRENADE	GEWHR GRANATE	РУЖЕЙНАЯ ГРАНАТА

RIFLE STOCK	GEWEHRKOLBEN	ПРИКЛАД ВИНТОВКИ
RIFLING	GEZOENER TEIL	НАРЕЗКА
RIM	RAND	ЗАКРАЙКА
RIMLESS	OHNE RUESENKAND	ПАТРОН С ГИЛЬЗОЙ БЕЗ
		ШЛИПКИ С ЗАКРАЙНОЙ
RIMMED	MIT RUESENKAND	ПАТРОН СО ШЛИПКОЙ С
		ЗАКРАЙНОЙ
RIVETTED	GENIETET	СКЛЕПАННЫЙ
ROCKET LAUNCHER	RACKETENWERFER	РЕАКТИВНАЯ УСТАНОВКА
ROD	STANGE	ПЕРУТ (ЖЕЗЛ)
ROTATING FIRING COMPARTMENT	DREHBARER KAMPFRAUM	ВРАЩАЮЩЕЕСЯ БОЕВОЕ ОТДЕЛЕНИЕ
ROTATING MOUNT	ROTIERENDER LAFETTE	ВРАЩАЮЩАЯСЯ УСТАНОВКА
ROTATING PERISCOPE	RUNDLICHTFERNROHR	ВРАЩАЮЩИЙСЯ ПЕРЕСКОП
ROUNDED MANTLET	GERUNDETER MANTEL	КРУГЛАЯ АМБРАЗУРА
SAFETY CATCH	SICHERUNGSPANG	ПРЕДОХРАНИТЕЛЬ
SAFETY HANDLE	SICHERUNGSLISTE	РЫЧАЖОК
SAFETY LEVER	SICHERHEITSHIEBEL	ПРЕДОХРАНИТЕЛЬНЫЙ РЫЧАГ
SAFETY LOCK	SICHERHEITSSCHLOSS	ПРЕДОХРАНИТЕЛЬ
SAFETY PIN	SICHERHEITSTIFT	ПРЕДОХРАНИТЕЛЬНАЯ ЧЕКА

SAFETY PIN AND RING	SICHERHEITSPIN UND RING	ПРЕДОХРАНИТЕЛЬНАЯ ЧЕКА И КОЛЬЦО
SEALING DISCS	DICHTUNGSSCHEIBEN	УПЛОТНИТЕЛЬНЫЕ ДИСКИ
SELF-PROPELLED ARTILLERY	STURMSSCHUTZE	САМОХОДНАЯ АРТИЛЛЕРИЯ
SELF-PROPELLED GUN	STURMSSCHUTZ	САМОХОДНОЕ ОРУДИЕ
SEMI-AUTOMATIC	HALBAUTOMATISCH	ПОЛУАВТОМАТИЧЕСКИЙ
SEMI-ELLIPTIC	HALB ELLIPTISCH	ПОЛУЭЛЛИПТИЧЕСКИЙ
SHEET METAL BODY	BLECHKORPER	КОРПУС ИЗ ЛИСТОВОГО МЕТАЛЛА
SHEET METAL CONE	BLECHKONUS	КОНУС ИЗ ЛИСТОВОГО МЕТАЛЛА
SHEET METAL SAFETY LEVER	BLECH SICHERHEITSEBEL	ПРЕДОХРАНИТЕЛЬНЫЙ РЫЧАГ ИЗ ЛИСТОВОГО МЕТАЛЛА
		СНАРЯД ЗА МОТОРОМ
SHELL BEHIND MOTOR	EXPLOSIONSLADUNG HINTER TRIEBLADUNG	
SHIELD	SCHILD	ЩИТ
SHIELD MAY OR MAY NOT BE EMPLOYED	WIRD MIT ODER OHNE SCHILD VERWENDET	ЩИТ МОЖНО ИСПОЛЬЗОВАТЬ
SHOCK ABSORBER	STOSSDAMPFER	АМОРТИЗАТОР
SHOCK ABSORBERS	STOSSDAMPFER	АМОРТИЗАТОРЫ
SHOCK ABSORBER CYLINDERS	STOSSDAMPFER ZYLINDER	ЦИЛИНДРЫ АМОРТИЗАТОРОВ

SHORTER TUBE THAN SU-100	KUERZERES ROHR ALS AN SU-100	БОЛЕЕ КОРОТКИЙ ЧЕМ НА СУ-100
SHORT STEPPED TUBE	KURZES ABGESETZTES ROHR	КОРОТКИЙ СТУПЕНЧАТЫЙ СТВОЛ
SHORT TUBE	KURZROHR	КОРОТКИЙ СТВОЛ
SIGHT	OPTIK ODER ZIELEINRICHTUNG	ПРИЦЕЛ
SIGHT BRACKET	AUFSATZ FUER ZIEL-EINRICHTUNG	КРОНИТЕЙН ПРИЦЕЛА
SILENCER	SCHALLDAMPFER	ГЛУШИТЕЛЬ
SINGLE BAFFLE	EINFACHES STAUROHR	ЗАМЕДЛИТЕЛЬ ТЯГИ ОДНОГО ЭЛЕМЕНТА
		ОДИН РЯД РЕЛЬСОВ
SINGLE BANK OF RAILS	EINFACHER RACKETENREIHE	ОДНОСТВОРЧАТЫЙ ОТКЛОННОЙ ЛЕК
SINGLE HINGED HATCH	EINFACHER EINSTIEGSDECKEL MIT SCHARNIREN	1 ЗАДНЕЕ КОЛЕСО
		ОДНА НАСАДКА ВЕНТУРИ
SINGLE REAR WHEEL	EINFACH BEREIFT ANTRIEBS-RAEDER	О ДВОЙНЫХ ГУСЕНИЧНЫХ КОЛЕС
		ШЕСТЕРНОЙ НАПРАВЛЯЮЩИЙ
SINGLE VENTURI	EIN RUECKSTOSSGASTRICHTER	ДУЛЬНЫЙ ТОРМОЗ
SIX DOUBLE TRACK WHEELS	SECH DOFFEL KETTEBRAEDER	
SIX SLOT MUZZLE BRAKE	MUENDUNGSEBREMSE MIT SECHS STAUROECHERN	

SIX SMALL RUBBER TIED
TRACK WHEELS
SIX SMALL STEEL DOUBLE
TRACK WHEELS
SLIDE
SLIDE CATCH
SLIDING WEDGE BREACHBLOCK
STOPPING SHIELD WITH TURNED
BACK SIDES
SOLID FRONT AXLE
SPADE GRIPS

SPARE TIRE
SPRIGOT TYPE GRENADE
LAUNCHER
SPLIT BOX TRAILS
SPLIT TRAILS

SECHS KLEINE HANTOUMMI
KETTENRAEDER
SECHS KLEINE DOFFELTE
STAHLKETTENRAEDER
SCHLITTEN
SCHLITTENHALTER
KEILVERSCHLUSS
SCHILD MIT NACH HINTEN
GEROEGENES SKITTEN
STARKE VORDERACHSE
DOFFELTE SPATENGRIFFE

ERSATZREIFEN
GRANATWERFER MIT
ZAPPENANSATZ
SPREIZ KASTENLAFETTE
SPREIZLAFETTE

6 МАЛЕНЬКОХ ГУСЕНИЧНЫХ КОЛЕС
КЕТТЕНРАДЕР
6 МАЛЕНЬКОХ СТАЛЬНЫХ ДВОЙНЫХ
ГУСЕНИЧНЫХ КОЛЕС
СКОЛЬЗЯЩАЯ ЧАСТЬ МЕХАНИЗМА
ЗАЩЕЛКА ХОМУТИКА ПРИЦЕЛА
ЗАТВОР СО СКОЛЬЗЯЩИМ КЛИНОМ
ЩИТ С НАКЛОНОМ НАЗАД СО
ВОГНУТЫМИ БОКАМИ
ОПЛОТННОЙ ПЕРЕДНИЙ МОСТ
ЗАТЪЛЫНИК С РУКОЯТКОЙ
УПРАВЛЕНИЯ ДЛЯ АВИАЦИОННОГО
ПУЛЕМЕТА
ЗАПАСНОЕ КОЛЕСО
РУЖЕЙНАЯ МОДИФИКА БЛУЛОЧНОГО
ТИПА
КОРОБЧАТЫЙ ХОБОТ ЛАФЕТА С
РАЗДВИЖНЫМИ СТАНИНАМИ
ХОБОТ ЛАФЕТА С РАЗДВИЖНЫМИ
СТАНИНАМИ

SPLIT TUBULAR TRAILS

SPOILER

SPRING HOISING
SQUARE MOTORED SHIELD
SQUARE SHIELD
STABILIZING VANES
STEEL DISC WHEELS WITH
SPONGE RUBBER FILLED
TIRES
STEPPED TUBE
STOCK RELEASE BUTTON

STRIP FEED
SUBMACHINEGUN
SUPERSTRUCTURE

SPREIZKASTENLAFETTE

STAUACHEIBE

FEDERHOEBEISE
VIERECKIGES SCHILD MIT
AUSSCHNITT IN DER MITTE
VIERECKIGES SCHILD
STABILISIERUNGS FLOSSEN
STAHLSCHWEDENRAEDER MIT
SCHWAMMUMMI GEFUELLTEN
REIFEN
ABGESTUFTES ROHR
SCHLOSS FUEHR SCHULTER-
STUETZE
ZUFUEHRERSTREIFEN
MASCHINENPISTOLE
PANZERKASTENAUFBAU

ТРУБЧАТЫЙ ХОБОТ ЛАФЕТА С
РАЗДВИЖНЫМИ СТАНИНАМИ
ПРИСПОСОБЛЕНИЕ ДЛЯ УМЕНЬШЕНИЯ
ДАЛЬНОСТИ, НО СОХРАНЯЮЩЕЕ
ВЫСОКОЕ ТРАЕКТОРИЕ
КОМУХ ДЛЯ ПРУЖИНЫ
КВАДРАТНЫЙ ЗУБЧАТЫЙ ЩИТ
КВАДРАТНЫЙ ЩИТ
СТАБИЛИЗАТОР
СТАЛЬНЫЕ ДИСКОВЫЕ КОЛЕСА С
ШИНАМИ НАПОЛНЕННЫМИ
ГУБЧАТОЙ РЕЗИНОЙ
СТУПЕНЧАТЫЙ СТВОЛ
ВКЛЮЧАЮЩАЯ КНОПКА ПРИКЛАДА
ПОДЛАНА ПОЛОСОЙ (КОПЕРНОМ)
ПИСТОЛЕТ-ПУЛЕМЕТ
КОРПУС

TANGENT CURVE	KURVENVISIER	НАСАТЕЛЬНЫЙ ИЗГИБ
TANK	PANZERKAMPFWAGEN	ТАНК
TAPERED TUBE	KONISCHES ROHR	СЛУЖИВАНЩИЙ СТВОЛ
TELESCOPIC SIGHT	ZIELFERNROHR	ТЕЛЕСКОПИЧЕСКИЙ ПРИЦЕЛ
THREE SECTION BOX TRAIL	DREI TEILLIGE KASTENLAFETTE	КОРОВАЧАТЫЙ ХВОСТ ИЗ ТРЕХ РАЗБОРНЫХ ЧАСТЕЙ
THROWING HANDLE	WURFGRIF	РУКОЯТКА ГРАНАТЫ
TORSION BAR	DREHSTAB	ТОРСИОННЫЙ СТЕРЖЕНЬ
TORSION BAR CRANK ARM	DREHSTABFEDERUNG	ЗАВОДНАЯ РУКОЯТКА ТОРСИОННОГО СТЕРЖЕНЯ
TOWED BY MUZZLE	GEZOGEN AM LAUFENDE	БУКИРОВАНАЯ ДУЛОМ ПУШКА
TRACK GUARD	KETTENSCHUTZ	КРЫЛЬЯ ТАНКА
TRACK RETURN ROLLERS	STEUERROLLEN	ПОДДЕРЖИВАЮЩИЙ РОЛИК ГУСЕНИЦ
TRACK WHEELS	KETTENRAEDER	ГУСЕНИЦА
TRAVERSING MECHANISM	SCHWENKEINRICHTUNG	ПОВОРОТНЫЙ МЕХАНИЗМ
TRIGGER	ABZUG	СПУСКОВОЙ КЛУБОК
TRIPOD	DREIBEIN	ТРЕНОЖНЫЙ СТАНОК, ТРЕНОГА
TRIPOD MOUNT	DREIFUSS	ТРЕНОЖНЫЙ СТАНОК
TRUCK	LASTKAMPFWAGEN	ГРУЗОВИК

TRUCK-TRACTOR	SCHLEPPER ODER SATTEL- SCHLEPPER	ТЯГАЧ
TUBE	ROHR	СТВОЛ
TUBE IN TRAVELLING POSITION	VERLADENES ROHR	СТВОЛ В ПОХОДНОМ ПОЛОЖЕНИИ
TURRET	TURM ODER AUFBAU	БАШНЯ
VENTS	LUFTOFFENUNGEN	ВОЗДУШНЫЕ ОТВЕРСТИИ
VENTURI	RUECKSTOSSGASTRICHTER	НАСАДКА ВЕНТУРИ
VENTURIS	MEHRERE RUECKSTOSS- GASTRICHTER	НАСАДКИ ВЕНТУРИ
VERTICAL SLIDING WEDGE	SENKRECHTEN KEILVENSCHLUSS	ВЕРТИКАЛЬНЫЙ СКОльзяЩИЙ КЛИН
VERTICAL VOLUTE	VERTIKAL SPIRALFEDER AUS FLACHSTAHL	ВЕРТИКАЛЬНЫЙ СПИРАЛЬНЫЙ ВИТОК
VISION SLIT	SEHLSCHLITZ	СМОТРОВАЯ ЦЕЛЬ
"V" NOTCH	"V" VISIERKINNE	ПРОРЕЗЬ ПРИЦЕЛА
WATER JACKET	WASSERMANTEL	ВОДЯНОЙ КОЖУХ
WELDED	GESCHWEISST	СВАРНОЙ
WELL SLOPED ARMOR	GUT GEMINKELTE PANZERUNG	КРУТОЙ НАКЛОН БРОНИ
WITH OR WITHOUT MUZZLE	MIT ODER OHNE MUENDUNGS-	С ДУЛЬНЫМ ТОРМОЗОМ ИЛИ БЕЗ
WRAKE	BRENNE	ДУЛЬНОГО ТОРМОЗА

WITH OR WITHOUT REINFORCED

MUZZLE

WOODEN SPOKED WHEELS WITH

SOLID RUBBER TIRES

WOODEN STOCK

WOODEN THROWING HANDLE

YOKE

MIT ODER OHNE

VERSTÄRKTEM ROHRMUNDUNG

HOLZSPRECHENRAEDER MIT

VOLLGUMMI REIFEN

GEWESKOLEN AUS HOLZ

WURFRIEFT AUS HOLZ

ROHRSCHULZE

С УСИЛЕННЫМ ДУЛОМ ИЛИ БЕЗ
УСИЛЕННОГО ДУЛАДЕРЕВЯННЫЕ КОЛЕСА СО СПИЦАМИ
НА СПЛОШНЫХ ШИНАХ

ДЕРЕВЯННЫЙ ПРИКЛАД

ДЕРЕВЯННАЯ РУКОЯТКА ГРАНАТ

ЯРМО ОБЪЕКТЧЕННОГО ТИПА

БЕЗ ДУЛА

DISTRIBUTION LIST
IDENTIFICATION HANDBOOK - SOVIET ORDNANCE EQUIPMENT

Assistant Chief of Staff, Intelligence, Department of the Army, Washington 25, D. C.	150
Assistant Chief of Staff, Intelligence, Department of the Army for Canadian Army Staff, Washington 25, D. C.	25
Assistant Chief of Staff, Intelligence, Department of the Army, Technical Branch, Washington 25, D. C.	100
Deputy Chief of Staff, Intelligence, United States Air Forces, Europe, APO 633, USAF.	50
Commander, Support Operations, Task Force Europe, APO 163, US Army	25
GLO, United States Air Forces, Europe, APO 633, USAF	3
Department of the Army Detachment, APO 757, US Army	20
Assistant Chief of Staff, Intelligence, 12th Air Force, APO 12, USAF	50
Intelligence Officer, United States Commander Berlin, APO 742, US Army	50
Assistant Chief of Staff G2, Seventh US Army, APO 46, US Army	2680
Commanding Officer, 66th Counter Intelligence Corps, APO 154, US Army	10
Commanding Officer, 7925th Personnel Survey Detachment, APO 757, US Army	5
US Liaison Officer, British Army of the Rhine, British Forces Post Office 40	2

Detachment "R", Department of the Army, ACSI, APO 172, US Army	10
Frankfurt Representative, Commander US Naval Forces Germany, APO 757, US Army	5
Commanding Officer, SDU, 6966th Composite Group, APO 407, US Army	20
Commanding Officer, 10th Special Forces Group (Airborne), APO 108, US Army	30
Commanding Officer, 513th MI Group, APO 757, US Army	50
Commanding Officer, 522d MI Battalion, APO 757, US Army	100
Commanding Officer, 532d MI Battalion, APO 46, US Army	25
Assistant Chief of Staff, G2, USAREUR Communications Zone, APO 58, US Army	20
G3, Southern Area Command, APO 407, US Army	25
G3, Western Area Command, APO 227, US Army	25
G3, Northern Area Command, APO 757, US Army	25
S3, Headquarters Area Command, APO 403, US Army	25
Intelligence Officer, Bremerhaven Port of Embarkation, APO 69, US Army	5
British Liaison Officer, G2 USAREUR, APO 403, US Army	300
ACS, G1, USAREUR, APO 403, US Army	2
ACS, G2, USAREUR, APO 403, US Army, ATTN: OB Sec	20

ACS, G2, USAREUR, APO 403, US Army, ATTN: S&T Sec	210
ACS, G3, USAREUR, APO 403, US Army	5
ACS, G4, USAREUR, APO 403, US Army	2
G (Int), Hq Northern Army Group, British Forces Post Office 40	20
Chief, Chemical Division, USAREUR, APO 403, US Army	2
Chief, Engineer Division, USAREUR, APO 403, US Army	25
Chief, Ordnance Division, USAREUR, APO 403, US Army	10
Chief, Quartermaster Division, USAREUR, APO 403, US Army	2
Chief, Signal Division, USAREUR, APO 403, US Army	3
Chief, Transportation Division, USAREUR, APO 403, US Army	5
91st Ordnance Detachment (Technical Intelligence Control), APO 403, US Army	100
US Army Attache, American Embassy, Moscow, USSR, c/o Diplomatic Mail Room, Office of US Civil Affairs, APO 742, US Army	5
US Army Attache, American Embassy, Navy 100, FPO, London, England	5
US Army Attache, American Embassy, APO 80, Bonn, Germany	5
US Army Attache, American Embassy, Vienna, Austria	5
US Army Attache, American Legation, Budapest, Hungary	5

US Army Attache, American Legation, Bucharest, Rumania	5
US Army Attache, American Embassy, Prague, Czechoslovakia	5
US Army Attache, American Embassy, Warsaw, Poland	5
US Army Attache, American Embassy, Belgrade, Yugoslavia	5
US Army Attache, American Embassy, APO 206, Athens, Greece	5
US Army Attache, American Embassy, APO 794, Rome, Italy	5
US Army Attache, American Embassy, Cairo, Egypt	5
US Army Attache, American Embassy, Jerusalem, Israel	5
US Army Attache, American Embassy, Damascus, Syria	5
US Army Attache, American Legation, Beirut, Lebanon	5
US Army Attache, American Embassy, APO 206A, Ankara, Turkey	5
US Army Attache, American Embassy, APO 170, Copenhagen, Denmark	5
US Army Attache, American Legation, Helsinki, Finland	5
US Army Attache, American Embassy, APO 85, Oslo, Norway	5
Commandant, US Army, Intelligence, Military Police and Special Weapons School, Europe, APO 172, US Army	90

Commandant, US Army Engineer School, Europe, APO 172, US Army	5
Commandant, US Army Ordnance School, Europe, APO 172, US Army	5
Commandant, US Army Signal School, Europe, APO 177, US Army	2
Commandant, US Army Quartermaster School, Europe, APO 108, US Army	2
Commandant, US Army Intelligence School, Fort Holabird, Baltimore 19, Maryland	100
Chief, Army Liaison Unit, c/o 7982nd USAREUR Liaison Gp, APO 757, US Army	5
Chief, ASAE, APO 757, US Army	5
Chief, NSAE, APO 757, US Army	5
Commanding Officer, 7987 AU Sci Det, APO 757, US Army	2
Etat-Major Du CCFFA, 2e Bureau, Baden-Oos, Germany	200
Commanding General, Allied Land Forces, Central Europe, APO 11, US Army	10
Commanding General, SETAF, APO 168, US Army	20
US EUCOM (J2), APO 128, US Army	5
Alternate Files	1

HEADQUARTERS
UNITED STATES ARMY, EUROPE
Office of the Assistant Chief of Staff, G2
APO 403 US Forces

AEAGB-A (D) 274/HS.2

SUBJECT: Change #1 to Identification Handbook

TO: All Recipients

1. Following is a list of changes to the Identification Handbook, Soviet Ordnance Equipment, dated July 1957.

a. Table of Contents - Complete Revision, pages I to XI.

b. Section I - Soviet Weapons: Delete pages 1; 18-25; 34; 35; 62-65; 80-83; 96-100; 108-117; 132; 133-139; 144; 145; 148-156; 157; 158; 160-182; 184-216; 240-250; and insert revised pages bearing same numbers. STAT

c. Add the following new pages: 132.1; 132.2; 156.1 to 156.4; 159 to 159.9; 183; 183.1; 184.1; 184.2; 186.1 to 186.6; 199 to 199.3; 210.1; 210.2; 217; 217.1; 240.1; 240.2; 246.1; 246.2; and 251 to 251.7.

d. Add Section II, European Satellites, S 1 - S 73.

FOR THE ASSISTANT CHIEF OF STAFF, G2:



BURTON R. BROWN
Colonel GS
Chief, Intelligence Production Branch

TABLE OF CONTENTS

SECTION I - SOVIET WEAPONS

	Page
SMALL ARMS	1
Characteristics of Small Arms	2
7.62-mm Nagant Revolver M1895	8
7.62-mm Tokarev Pistol M1933 (TT-33).	10
9-mm Pistol Makarov (PM).	12
7.62-mm Mossin-Nagant Rifle M1891/30.	14
7.62-mm Mossin-Nagant Carbine M1944	16
7.62-mm Tokarev Semiautomatic Rifle M1940 (SVT)	18
7.62-mm Semiautomatic Carbine Simonov (SKS)	20
7.62-mm Shpagin Submachine Gun M1941 (PPSh)	22
7.62-mm Sudayev Submachine Gun M1943 (PPS).	24
7.62-mm Submachine Gun "Kalashnikov" (AK)	26
7.62-mm DP Light Machine Gun (DT)	28
7.62-mm DFM Light Machine Gun	30
7.62-mm Tank Machine Gun (DT)	32
7.62-mm Tank Machine Gun DTM.	34

	Page
7.62-mm Company Machine Gun M1946 (RP-46)	36
7.62-mm Light Machine Gun RPD.	38
7.62-mm Maxim Heavy Machine Gun M1910.	40
7.62-mm Goryunov Heavy Machine Gun M1943	42
12.7-mm Heavy Machine Gun DShK M1938	44
14.5-mm Simonov PTRS Antitank Rifle M1941.	46
GRENADES.	48
F-1 Defensive Hand Grenade	50
RGD-33 Offensive/Defensive Hand Grenade.	52
RG-42 Offensive Hand Grenade	54
RPG-40 Hand Grenade.	56
RPG-43 Hand Grenade.	58
RPG-6 Hand Grenade	60
ROCKET AND RECOILLESS ANTITANK WEAPONS.	62
Infantry Antitank Launcher RPG-2	64
82-mm Recoilless Antitank Gun.	66
107-mm Recoilless Antitank Gun	68

	Page
MORTARS	70
82-mm Mortar M1941	72
82-mm Mortar M1943	74
120-mm Mortar M1938.	76
120-mm Mortar M1943.	78
160-mm Mortar M1943.	80
160-mm Mortar M-160.	82
240-mm Mortar M1953.	84
ARTILLERY	86
45-mm Antitank Gun M1942	90
57-mm Antitank Gun M1943 (ZIS-2)	92
76-mm Regimental Gun (Howitzer) M1927.	94
76-mm Divisional Gun M1942 (ZIS-3)	96
85-mm Divisional Gun D-44.	98
85-mm Auxiliary Powered Antitank Gun	100
100-mm Field Gun M1944 (BS-3).	102
100-mm Antitank Gun M1955.	104

	Page
122-mm Howitzer M1938 (M-30)	106
122-mm Corps Gun M1931/37 (A-19)	108
122-mm Field Gun D-74	110
130-mm Field Gun M1954	112
152-mm Howitzer M1943 (D-1)	114
152-mm Howitzer D-20	116
152-mm Gun-Howitzer M1937 (ML-20)	118
152-mm Gun M1935 (BR-2)	120
203-mm Howitzer M1931 (B-4)	122
203-mm Gun Howitzer M1955	124
210-mm Gun M1939 (BR-17)	126
280-mm Mortar (Howitzer) M1939 (BR-5)	128
305-mm Howitzer M1940 (BR-18)	130
ANTI-AIRCRAFT ARTILLERY	132
14.5-mm Heavy Anti-aircraft Machine Gun ZPU-2	132.2
14.5-mm Heavy Anti-aircraft Machine Gun ZPU-4	134
37-mm Automatic Anti-aircraft Gun M1939	136
57-mm Anti-aircraft Gun S-60	138

	Page
76-mm Anti-aircraft Gun M1938	140
85-mm Anti-aircraft Gun M1939	142
100-mm Anti-aircraft Gun M1949	144
122-mm Anti-aircraft Gun M1955	146
ARTILLERY ROCKETS AND GUIDED MISSILES	148
132-mm (16-round) Rocket Launcher M13	150
140-mm (16-round) Rocket Launcher BM14	152
200-mm (4-round) Rocket Launcher	154
240-mm (12-round) Rocket Launcher BM24	156
240-mm (12 tube) Rocket Launcher on TPM M1954	156.2
Rocket Launcher (6 Rounds)	156.4
300-mm (12 round) Rocket Launcher M31	158
Artillery Rocket (Amphibious Chassis)	159.1
Artillery Rocket (JS Chassis)	159.3
Surface-To-Surface Missile (JS Chassis)	159.5
Surface-To-Surface Missile (Redstone Type)	159.7
Surface-To-Air Missile (Nike Type)	159.9

	Page
TANKS	160
Characteristics of Tanks	161
Medium Tank T-34 (76)	170
Medium Tank T-34 (85)	172
Medium Tank T-44	174
Medium Tank T-54	176
Heavy Tank JS-1	178
Heavy Tank JS-2	180
Heavy Tank JS-3	182
New Heavy Tank	183.1
SELF-PROPELLED ARTILLERY AND ASSAULT GUNS	184
14.5-mm AA Heavy Machine Gun on BTR152	184.2
57-mm Automatic Antiaircraft Gun M1939, Self-Propelled	186
Twin 57-mm Automatic Antiaircraft Gun Self-Propelled	186.2
45-mm Self-Propelled Antitank Gun	186.4
57-mm Self-Propelled Antitank Gun	186.6
76-mm Self-Propelled Gun M1942/43	188
Assault Gun SU-85	190

	Page
Assault Gun SU-100	192
Assault Gun JSU-122 (A-19S)	194
Assault Gun JSU-122 (D-25S)	196
Assault Gun JSU-152	198
Superheavy Self-Propelled Gun (Conventional Type)	199.1
Superheavy Self-Propelled Gun (Unconventional Type)	199.3
WHEELED ARMORED VEHICLES	200
BA-64 Armored Car	202
Armored Personnel Carrier BTR-40	204
Armored Personnel Carrier BTR-152	206
AMPHIBIOUS VEHICLES	208
Amphibious Jeep MAV-69	210
Cross Country Vehicle GAZ-47	210.2
6x6 Wheeled Amphibian BAV	212
Tracked Amphibian K-61	214
Amphibious Tank	216
Amphibious Armored Personnel Carrier	217.1

	Page
TRANSPORTATION VEHICLES	218
Motorcycle M-72	220
Truck Cargo 4x2, GAZ-51	222
Truck Cargo 4x4, GAZ-63	224
Truck 4x4, GAZ-67B	226
Truck 4x4, GAZ-69	228
Truck Cargo, 4x2, ZIS-150	230
Truck Cargo, 4x2, ZIS-150	232
Truck Cargo, 6x6, ZIS-151	234
Truck Cargo, 4x2, MAZ-200	236
Truck YaAZ-210 Series (Cargo and Truck Tractor)	238
TRACKED PRIME MOVERS	240
Armored Tracked Prime Mover	240.2
Tracked Prime Mover M-2	242
Tracked Prime Mover YA-12 and YA-13	244
Tracked Prime Mover YA-14	244.2
Tracked Prime Movers YA-14 (Modified)	246
Tracked Prime Mover M1954	248
Tracked Prime Mover M1950	250

	Page
SPECIAL PURPOSE ARMORED TRACKED VEHICLES	251.1
T-34 Chassis	251.2
T-34 Recovery Vehicle With Boom	251.3
SU-85 Chassis	251.4
SU-100 Chassis	251.5
JS Chassis	251.6
JSU Chassis	251.7

SECTION II - EUROPEAN SATELLITES

CZECHOSLOVAKIA	83
7.65-mm Pistol M1950	85
7.62-mm Automatic Pistol	87
7.92-mm Rifle M1924	89
7.62-mm Semi-Automatic Rifle M1952	811
7.62-mm Submachine Gun M24 and M26	813
9-mm Submachine Gun M23 and M25	815
7.92-mm Light Machine Gun Model ZB30	817

CZECHOSLOVAKIA (Cont'd)	Page
7.92-mm Heavy Machine Gun Model ZB37	S19
7.62-mm Light Machine Gun M1952	S21
82-mm Recoilless Gun T-21 (Taramice)	S23
85-mm Field Gun M1952	S25
100-mm Field Gun M1953	S27
152-mm Howitzer M18/46	S29
12.7-mm Quad Mounted Antiaircraft Heavy Machine Gun	S31
85-mm Antiaircraft Gun	S33
130-mm (32-Tube) Rocket Launcher Rn130	S35
Truck, Cargo, 4x2 Skoda 706R	S37
Truck, Cargo, 4x2 Praga S5T	S39
Truck, Cargo, 4x4 Tatra 805	S41
Truck, Cargo, 4x4 Tatra 137	S43
Truck, Cargo, Tatra 138	S45
Truck, Cargo, 6x6 Tatra 111	S47
Truck, Cargo, 6x6 Praga V3S	S49
EAST GERMANY	S51
7.92-mm Carbine K98K	S53
7.92-mm Submachine Gun MP44	S55

EAST GERMANY (Cont'd)	Page
7.92-mm Machine Gun MG42	S57
7.92-mm Light Machine Gun MG34	S59
Armored Car SK-1	S61
Water Cannon SK-2	S63
Amphibious Jeep P2S	S65
Truck, 4x4 P2M	S67
Truck, Cargo, 4x2 Horch H3A	S69
Truck, Cargo, 4x2 Horch H6	S71
Truck, Cargo, 6x6 Horch G-5	S73

GLOSSARY

Recognition Features--ENGLISH, GERMAN, & RUSSIAN Vocabulary	252
---	-----

SECTION I

SOVIET WEAPONS

SMALL ARMS

The Soviet Army of today is well equipped with modern small arms. In general, Soviet small arms are rugged, well made, and effective. The squad weapons are part of the new family of small arms which fires the new 7.62mm rimless short round. This round is used for the new RPD light machine gun, the SKS semiautomatic carbine, and the AK submachine gun. These new weapons have largely replaced the older models which used the 7.62mm rimmed long round.

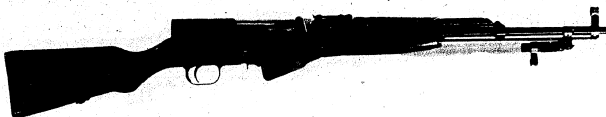
7.62-mm TOKAREV SEMIAUTOMATIC RIFLE M1940 (SVT)

The Model 1940 Tokarev is a gas operated, semiautomatic rifle. It may be loaded from strip-in clips through the top of the receiver, with an empty magazine in place, or by insertion of a loaded magazine into the bottom of the receiver. Manual safety is a swinging lever inside the trigger guard which can be pivoted in to block the rearward trigger movement.

There are two models in existence--the M1938 and M1940. They differ in stock design and in minor changes in the muzzle brakes and magazine catches. The Model 1940 is the one most commonly found in use, and is considered the production model. This weapon is regarded as being overcomplicated and subject to frequent malfunction.

CHARACTERISTICS

Caliber.....	7.62-mm
Ammunition.....	M1908 "LP"
Operation.....	Gas operated
Magazine capacity.....	10-round box
Barrel length.....	24.6 inches
Length w/o bayonet.....	48.27 inches
Weight w/o bayonet.....	8.6 pounds
Muzzle velocity.....	2,750 feet per second
Effective range w/o telescope.....	440 yards



7.62 MM SEMI-AUTOMATIC CARBINE "SIMONOV" (SKS)

7.62-mm SEMIAUTOMATIC CARBINE SIMONOV (SKS)

A carbine by Soviet nomenclature but qualified as a rifle by US standards. It is air cooled, gas operated, and has a permanently attached, folding knife-type bayonet. Some older models, however, have a cruciform-type bayonet instead.

It is a well designed weapon and is replacing all other rifles and carbines in the Soviet Army.

It utilizes the Model 1943 short ammunition. It may be easily recognized by the triangular portion of the magazine which extends through the lower side of the stock just forward of the trigger guard.

CHARACTERISTICS

Caliber.....	7.62-mm
Ammunition.....	M1943 short
Operation.....	Gas, semiautomatic
Magazine.....	Staggered box type
Magazine capacity.....	10 rounds
Barrel length.....	20.4 inches
Length w/ bayonet extended.....	49.6 inches
Muzzle velocity.....	2,425 feet per second
Effective range.....	440 yards
Front sights.....	Post with circular guard
Rear sights.....	Tangent leaf



7.62 MM SHPAGIN SUBMACHINE GUN M1941 (PPSH)

7.62-mm SHPAGIN SUBMACHINE GUN M1941 (PPSh)

The 7.62-mm submachine gun, PPSH-41 (Shpagin), is a high cyclic rate weapon that can be fired either full or semiautomatic. The change lever for selecting the type of fire is located on the trigger guard; for automatic fire, it is pushed forward; for semiautomatic fire, the lever is in the rear position.

The barrel jacket, which extends beyond the muzzle, acts as a muzzle brake and compensator. Recognition features are the wooden stock, drum-type or long curved box magazine (both of which are interchangeable), slotted barrel casing with diagonally cut end, and firing selector located within trigger guard.

CHARACTERISTICS

Caliber.....	7.62-mm
Ammunition.....	M-1930 "p"
Operation.....	Blowback
Magazine.....	71-round drum or 35-round magazine
Cyclic rate of fire.....	700-900 rounds per minute
Practical rate of fire.....	100 rounds per minute
Type of fire.....	Selective
Barrel length.....	10.63 inches
Overall length.....	33.15 inches
Weight w/loaded drum (or box) magazine.....	11.99 pounds (9.26 pounds)
Weight w/o magazine.....	7.72 pounds
Muzzle velocity.....	1,640 feet per second
Effective range (short bursts).....	220 yards



7.62 MM SUDAYEV SUBMACHINE GUN M1943 (PPS)

7.62-mm SUDAYEV SUBMACHINE GUN M1943 (PPS)

The 7.62-mm submachine gun, PPS-1943, is of later design and manufacture than the PPSH-1941 submachine gun. The stock is hinged and folds up and forward when the stock release button is pressed, thus facilitating carrying. It is fully automatic in operation but the cyclic rate has been deliberately retarded to permit "touching off" of single rounds. A compensator is welded on the front of the barrel jacket. The gun fires from an open bolt and, with a loaded magazine in place, it is ready to fire.

CHARACTERISTICS

Caliber	7.62-mm
Ammunition	M1930 "pp"
Operation	Blowback
Magazine	35 round box
Cyclic rate of fire	650 rounds per minute
Practical rate of fire	100 rounds per minute
Type of fire	Full Automatic
Barrel length	39.45 inches
Length w/stock extended	32.72 inches
Length w/stock folded	24.25 inches
Weight w/loaded magazine	7.98 lbs.
Weight w/o magazine	6.61 lbs.
Muzzle velocity	1640 feet per second
Effective range	
short bursts	220 yards, approx.
long bursts	110 yards, approx.



7.62MM SUB-MACHINE GUN "KALASHNIKOV" (AK)

7.62-mm TANK MACHINE GUN DTM

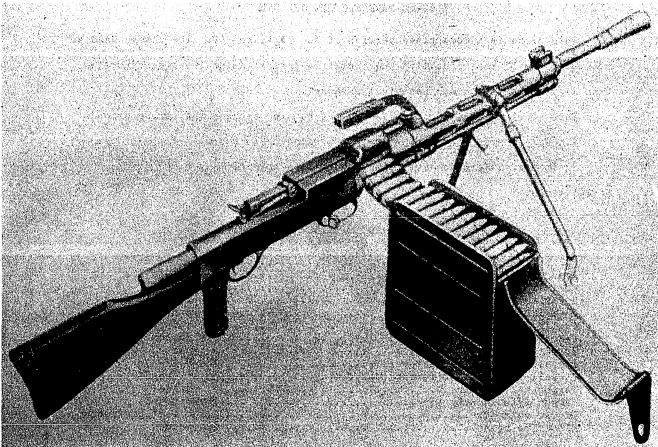
This piece is a modernized version of the Degtyarev DT. The change used to modernize the DT was relocating the operating spring behind the receiver rather than around the piston rod beneath the barrel.

This model is easily recognized by the housing because the spring extends approximately four to five inches over the retractable stock.

It is used interchangeably with the DT as a coaxial weapon and bow gun on Soviet tanks.

CHARACTERISTICS

Caliber.....	7.62-mm
Ammunition.....	Model 1930 D
Operation.....	Gas
Magazine.....	Double layer drum
Magazine capacity.....	60 rounds
Cyclic rate of fire.....	600 rounds per minute
Practical rate of fire.....	100 rounds per minute
Barrel length.....	23.5 inches
Overall length stock extended.....	46.46 inches
Overall length stock retracted.....	39.76 inches
Weight w/o magazine.....	22 pounds
Weight w/loaded magazine.....	28.46 pounds
Muzzle velocity.....	2,756 feet per second
Effective range.....	880 yards



7.62 MM COMPANY MACHINE GUN M1946 (RP-46)

ROCKET AND RECOILLESS ANTITANK WEAPONS

Although the Soviets did test a recoilless gun of their own in the Russo-Finnish War of 1939/40, they did not employ any rocket or recoilless antitank weapons of their own in World War II. United States bazookas, German Panzerfausts and other equipment obtained from non-Soviet sources were used when available.

The postwar Soviet Army has, however, outfitted itself with a complete and effective line of recoilless weapons. The rifle squad has the RPG-2, an improved Panzerfaust, while both the 82mm and 107mm recoilless guns are available to higher units. In contrast to United States weapons the Soviet recoilless guns are usually not rifled.



INFANTRY ANTI-TANK LAUNCHER (RPG-2)

INFANTRY ANTITANK LAUNCHER RPG-2

The RPG-2 is patterned after the German World War II Panzerfaust, and is a very light, portable effective antitank weapon.

Although very light in weight, it is capable of great armor penetration and by its use one man may easily knock out a tank.

Unlike the German weapon, it may be reloaded and fired as many times as needed.

It may be recognized by its small wooden shielded, open-ended tube, with a projectile head much larger than the body of the weapon itself, projecting from the front.

CHARACTERISTICS

Caliber of tube.....	40-mm
Caliber of projectile.....	82-mm
Method of operation.....	Rocket
Method of loading.....	Hand loads into muzzle
Length without projectile.....	47 inches
Weight of weapon.....	15 pounds
Weight of projectile.....	5 pounds 9 ounces
Muzzle velocity.....	250 feet per second
Effective range.....	150 yards
Penetration.....	8 to 9 inches



82 MM RECOILLESS ANTITANK GUN

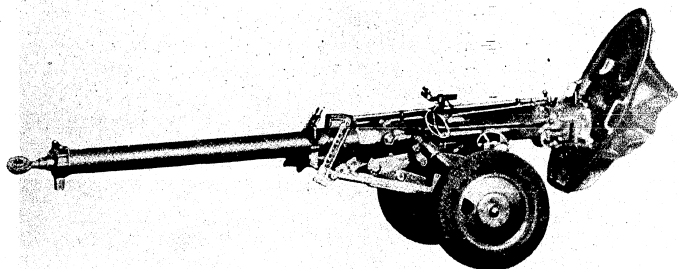
160-mm MORTAR M1943

The 160-mm mortar provides an important source of firepower for the Soviet rifle division. It is employed in much the same way as the U.S. Army employs howitzers of similar caliber, even though its range is considerably less. The mortar has a two wheeled carriage, which may be towed behind a truck.

Recognition features are the straight front edge on base plate; large spring and cylinder on right side of tube just above wheel; elevating and traversing hand wheels; recoil mechanism under barrel; towed by barrel using a muzzle adapter. On the carriage, the base plate extends considerably behind the wheels.

CHARACTERISTICS

Caliber.....	160-mm
Weight in firing position.....	2,381 pounds
Range.....	5,468 yards
Elevation.....	45 to 85 degrees
Rate of fire.....	3 rounds per minute
Weight in traveling position.....	2,480 pounds
Weight of HE projectile.....	88.18 pounds
Length of tube.....	10.75 inches
Prime mover.....	213-151 truck
Diameter of base plate.....	5.25 feet



160 MM MORTAR M-160

160-mm MORTAR, M-160

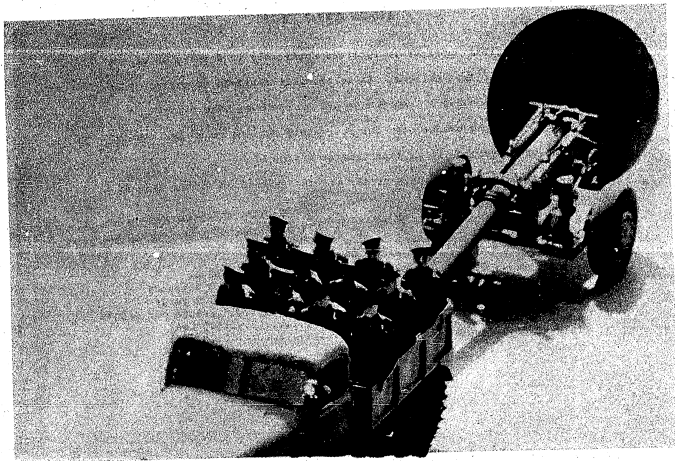
This mortar first appeared in 1953 and apparently is a revision of the model 1943 mortar of this caliber. It is probably designed to replace this piece. The new weapon has a longer tube and an improved base plate.

To load, the tube breaks near the base plate and the round is inserted through the open breech. It is then trigger fired.

Recognition features of this mortar are the pickets on either side of the tube and the round base plate.

CHARACTERISTICS

Caliber.....	160-mm
Weight.....	2,500 pounds
Range.....	8,000 yards
Rate of fire.....	3 rounds per minute
Length of tube.....	13.5 feet
Diameter of base plate.....	5.25 feet

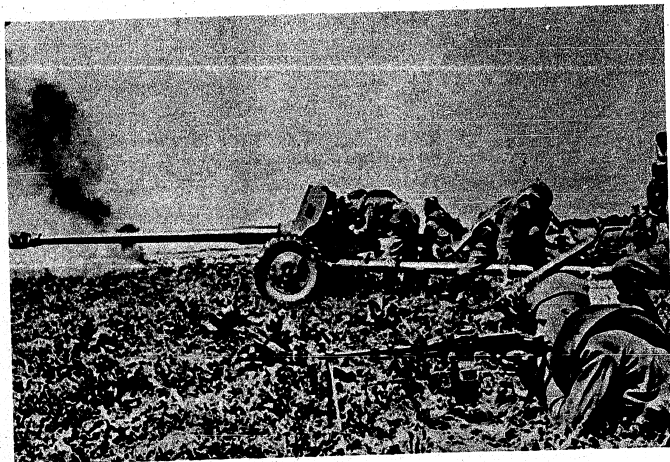
**240 MM MORTAR M1953****76-mm DIVISIONAL GUN M1942 (ZIS-3)**

This gun is identical with the M1939 except that it is fitted with a double baffle muzzle brake and is mounted on a modified carriage of the 57-mm gun, with tubular steel split trails. Remarkable for its lightness and mobility, it is somewhat unstable in action owing to its light weight.

This former standard light field piece has been replaced in the new Soviet division TO&E's. However, complete replacement of material has not yet been effected. Besides its use in the Soviet Army, it has been provided in quantity to all the Satellites.

CHARACTERISTICS

Caliber.....	76.2-mm (3 inches)
Muzzle velocity w/HE.....	2,231 feet per second
Muzzle velocity w/HVAP.....	3,167 feet per second
Range.....	14,545 yards
Length of tube w/muzzle brake.....	127.5 inches
Rate of fire.....	25 rounds per minute
Weight (firing position).....	2,460 pounds
Weight of projectile.....	13.5 pounds
Elevation.....	-5 to +27 degrees
Traverse.....	54 degrees



85 MM DIVISIONAL GUN D-44

85-MM DIVISIONAL GUN D-44

The gun is an adaptation to field purposes of the 85-mm tank gun M1944 used with the T-34 medium tank, which in turn was derived from the original 85-mm antiaircraft gun M1939. It is believed to have somewhat better performance characteristics than its tank counterpart. However, it utilizes the same ammunition. The low silhouette carriage is light weight, and the recoil mechanism is behind the shield, mounted on top of the breech block. Trails are tubular. This piece is replacing the 76-mm M1942.

CHARACTERISTICS

Caliber.....	85-mm
Muzzle velocity.....	3,379 feet per second
Range.....	19,208 yards
Length of tube w/muzzle brake.....	15 feet 4 inches
Weight in firing position.....	3,748 pounds
Weight of complete round AP-T.....	35 pounds
Weight of complete round HVAP.....	26 pounds
Rate of fire.....	20 rounds per minute
Elevation.....	-5 to +35 degrees
Traverse.....	54 degrees
Armor penetration.....	5.43 inches @ 550 yards



85 MM AUXILIARY POWERED ANTI-TANK GUN

85-mm AUXILIARY POWERED ANTITANK GUN

This is the newest of Soviet artillery innovations. It is an 85-mm antitank gun M1945 on which has been mounted a small two cycle engine and a steering arrangement coupled to a large rubber tire trail wheel. By means of this modification, the weapon is capable of traveling under its own power carrying with it the full crew and a basic load of ammunition. This ammunition is stored in a removable steel box on the right trail.

The piece is capable of displacing when under fire, with no assistance from a prime mover, although it may be towed by a standard truck for long hauls. It is recognizable by the steering wheel and large trail wheel near the end of the trails and the motor housing mounted on the left trail.

CHARACTERISTICS

Caliber.....	85-mm (3.35 inches)
Muzzle velocity.....	5,379 feet per second (HVAP)
Range.....	18,208 yards
Length of tube w/muzzle brake.....	184 inches (15 feet, 4 inches)
Weight.....	5,000 pounds
Weight of projectile.....	10.92 pounds
Penetration.....	5.43 inches at 550 yards
Rate of fire.....	20 rounds per minute
Elevation.....	-5 to +35 degrees
Traverse.....	54 degrees
Maximum speed.....	10 miles per hour
Engine.....	2 cycle gasoline
Cruising range.....	5 miles



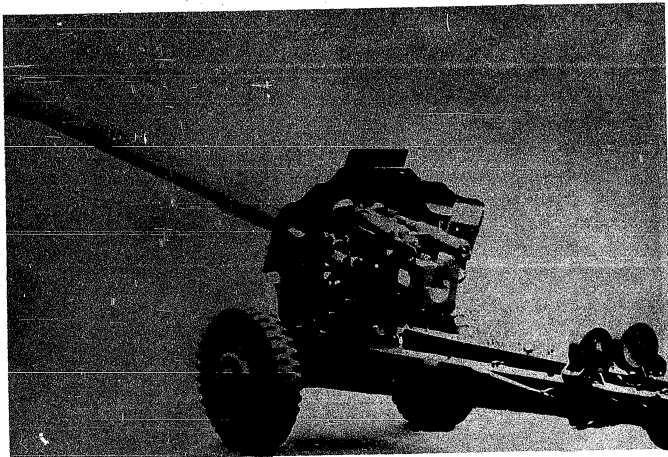
100 MM FIELD GUN M1944 (BS-3)

122-mm CORPS GUN M1931/37 (A-19)

This piece is basically identical with the 122-mm Gun M1931, which it has replaced in the Soviet Army. The difference between the two pieces are in the carriages. The later model with the carriage similar to that of the 152-mm gun-howitzer M1937, is readily distinguished by the fact that the equilibrators slope backward, while those of the older gun slope forward. The later model also has a rack and pinion type elevating mechanism which allows a greater maximum elevation. Postwar versions of this weapon have dual wheels with pneumatic tires. This gun has been furnished in substantial quantities to the Satellite Armies.

CHARACTERISTICS

Caliber.....	122-mm (4.8 in.)
Muzzle velocity.....	2,625 f.p.s.
Range.....	22,747 yards
Length of tube.....	216 inches
Weight (firing position).....	15,692 lbs.
Rate of fire.....	5-6 rounds per minute
Elevation.....	-2 to +65 degrees
Traverse.....	58 degrees
Weight of HE projectile.....	55 lbs.



122 MM FIELD GUN D-74

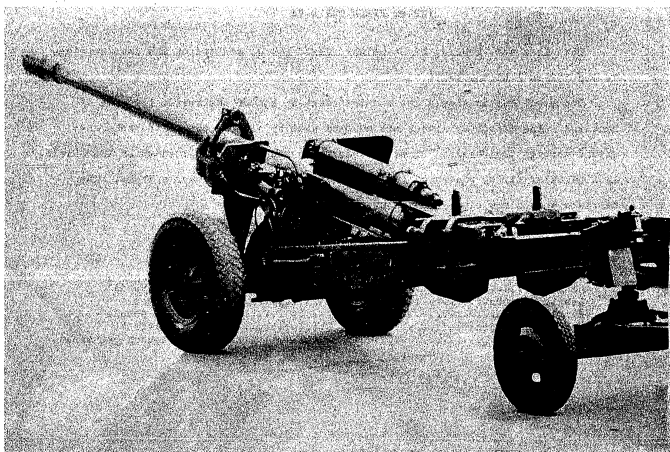
122-mm FIELD GUN D-74

This is a very mobile, light weight, field piece, mounted on the same carriage as the 152-mm Howitzer D-20.

Two steel caster wheels are mounted near the end of the trails for ease of handling. The recoil cylinders are mounted side by side on top of the tube and extend through the shield. Directly underneath the tube, just forward of the shield, is a circular firing platform. The tube has a double baffle muzzle brake. The carriage wheels are single and pneumatic tired.

CHARACTERISTICS

Caliber.....	122-mm
Range.....	24,000 yards
Length of tube.....	16.8 feet
Weight.....	11,000 pounds
Weight of projectile.....	56 pounds
Rate of fire.....	5-6 rounds per minute



130 MM FIELD GUN M1954

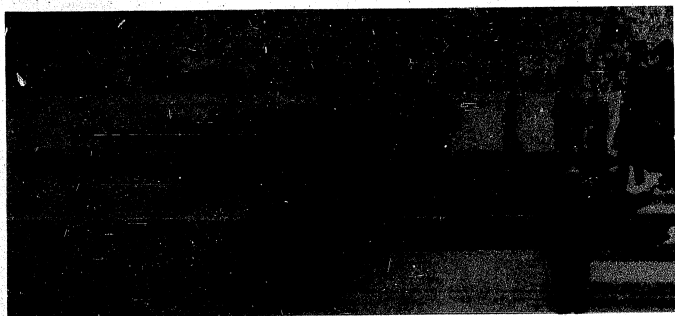
130-mm FIELD GUN M1954

The oldest of the new family of artillery pieces, this weapon first appeared in the Moscow Parade in 1954. The weapon is a modern piece, possessing many of the same characteristics of the naval 130-mm gun.

It is easily recognizable by the recoil cylinder located above the tube and the large collar around the tube forward of the shield. It has a pepper pot type muzzle brake and is jacked out of battery when in the travelling position. The carriage has large single pneumatic tires and large box type split trails. The spades are removed and placed on top of the trails when travelling. The ends of the trails are supported by a light pneumatic tire dolly.

CHARACTERISTICS

Caliber.....	130-mm
Range.....	30,000 yards
Length of tube.....	22 feet
Weight.....	15,000 pounds
Weight of projectile.....	75 pounds
Rate of fire.....	5-6 rounds per minute



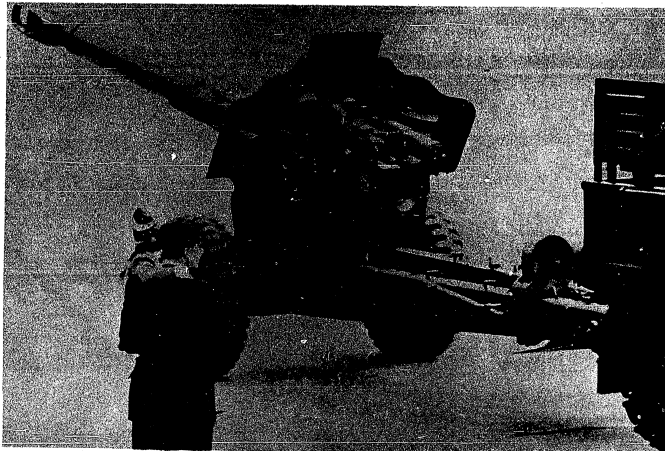
152MM HOWITZER M-1943 (D-1)

152-mm HOWITZER M1943 (D-1)

This weapon has a much lighter carriage than any previous model of this caliber. It is therefore much more mobile. It has a double-baffle muzzle brake. The carriage and recoil system are the same as that of the 122-mm Howitzer M1938. Thus, this weapon gives the same performance as its predecessors but has lighter weight and greater mobility.

CHARACTERISTICS

Caliber.....	152.4-mm (6 in.)
Muzzle velocity.....	1,667 feet per second
Range.....	15,560 yards
Length of tube w/muzzle brake.....	156 inches
Weight (firing position).....	7,927 lbs.
Weight of projectile.....	88 lbs.
Rate of fire.....	4 rounds per minute
Elevation.....	-3 to +63 degrees
Traverse.....	35 degrees



152 MM HOWITZER D-20

152-mm HOWITZER D-20

This piece is the latest development in this caliber. It is very light and mobile, and has the same carriage as the 122-mm Field Gun D-74.

The tube has a winged double baffle muzzle brake. It is towed by a tracked prime mover.

CHARACTERISTICS

Caliber.....	152-mm
Range.....	15,000 yards
Length of tube.....	15 feet
Weight.....	16,000 pounds
Weight of projectile.....	88 pounds
Rate of fire.....	4 rounds per minute



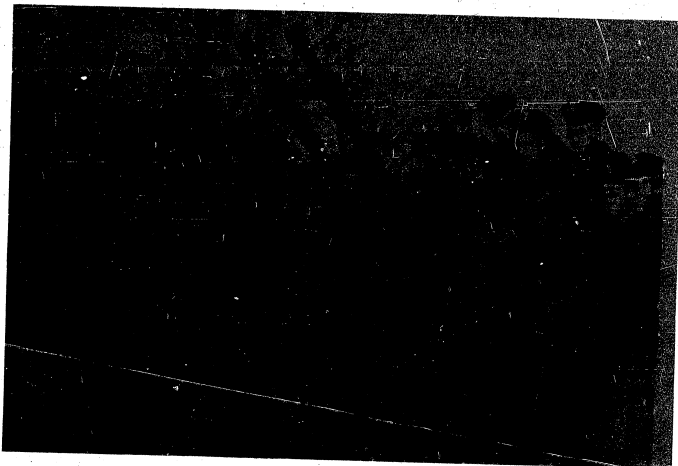
152MM GUN-HOWITZER M-1937 (ML-20)

ANTIAIRCRAFT ARTILLERY

Since the Germans devoted little attention to strategic bombing of the Soviet Union during World War II, the Soviets did not press the development and production of heavy antiaircraft guns and highly efficient antiaircraft fire control systems as strongly as did the Germans and Western Allies. With the advent of globe girdling bombers and atomic weapons, the Soviet antiaircraft weapons designers have been forced to concentrate on the development of better antiaircraft weapons and more accurate fire control.

As a result of this effort, a whole new family of antiaircraft weapons has been developed and put into production. These new weapons indicate very clearly the Soviet ability to copy the good features of other nation's weapons, add their own improvements, and come up with a very acceptable, modern piece of antiaircraft artillery.

Experiences in Korea indicate that current Communist fire control equipment and techniques were considerably superior to those employed by the Soviets in World War II. Details of principal Soviet antiaircraft weapons are presented on the following pages.



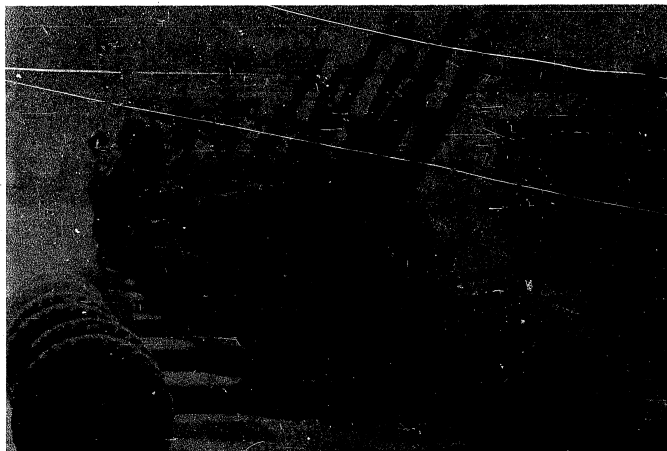
14.5 MM HEAVY ANTIAIRCRAFT MACHINE GUN (ZPU-2)

14.5-mm HEAVY ANTIAIRCRAFT MACHINE GUN ZPU-2

This 14.5-mm machine gun is one of the family of Soviet heavy AA machine guns. The ZPU-2 is a twin barreled weapon, mounted on a light two wheeled carriage. The weapon may be towed by a truck. The weapon is fired from the carriage by lowering the wheels. One of the primary recognition features of this weapon is the two large ammunition boxes located on either side of the guns. These weapons are in wide use, but are not believed to be effective against fast flying aircraft.

CHARACTERISTICS

Caliber.....	14.5-mm
Ammunition available.....	AP, API, API-T, HEI
Operation.....	Recoil
Feeding device.....	Metal link belt
Method of cooling.....	Air
Cyclic rate of fire.....	800 rpm per gun
Practical rate of fire.....	250 rpm per gun
Barrel length.....	52 inches
Gun length.....	81 inches
Muzzle velocity.....	3,200 feet per second
Effective range: Vertical.....	3,500 feet
Horizontal.....	3,000 yards



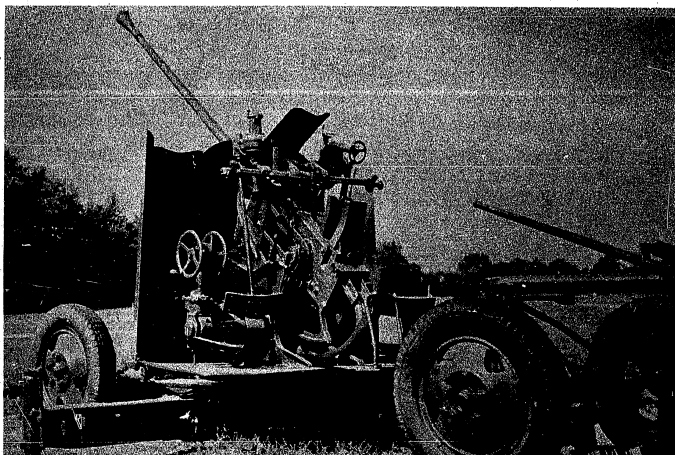
14.5MM HEAVY ANTI-AIRCRAFT MACHINE GUN ZPU-4

14.5-mm HEAVY ANTI-AIRCRAFT MACHINE GUN ZPU-4

The ZPU-4 is four 14.5-mm heavy machine guns mounted on a light four wheeled carriage very similar to that formerly used to mount the 25-mm anti-aircraft gun. This weapon may be towed by a light truck. In firing position the carriage is lifted from its wheels by leveling jacks. Recognition features on the ZPU-4 is the large drum on which the guns are mounted. This weapon is in wide use, but is not believed to be effective against fast flying aircraft.

CHARACTERISTICS

Caliber.....	14.5-mm
Ammunition available.....	AP, API, API-T, HEI
Operation.....	Recoil
Feeding device.....	Metal link belt
Method of cooling.....	Air
Cyclic rate of fire.....	800 rounds per minute/gun
Practical rate of fire.....	250 rounds per minute/gun
Barrel length.....	52 inches
Gun length.....	84 inches
Muzzle velocity.....	3,200 feet per second
Effective vertical range.....	3,500 feet
Effective horizontal range.....	3,000 yards



37 MM | AUTOMATIC ANTI-AIRCRAFT GUN M1939

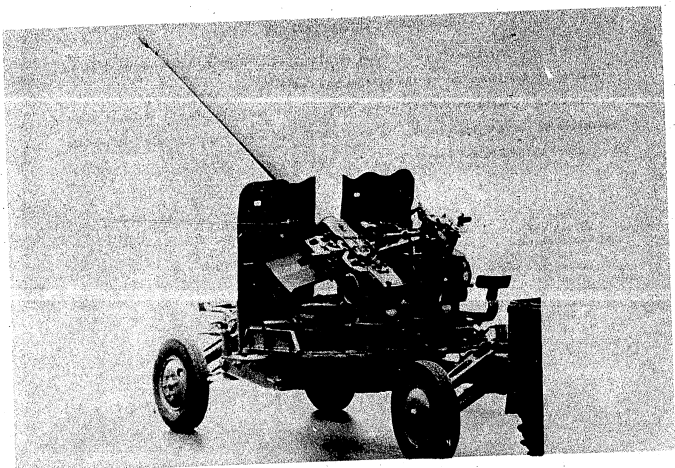
37-mm AUTOMATIC ANTI-AIRCRAFT GUN M1939

This light antiaircraft gun is used in all types of line divisions as well as in antiaircraft divisions and in the Air Defense Force.

This gun is based on the well-known Bofors 40-mm antiaircraft gun which it closely resembles in outward appearance. It is elevated and traversed by double hand wheels instead of by cranks and sometimes it is provided with a shield.

CHARACTERISTICS

Caliber.....	37-mm (1.46 inches)
Muzzle velocity.....	2,887 feet per second
Vertical range.....	19,005 feet
Horizontal range.....	8,746 yards
Length of tube w/flash hider.....	101.96 inches
Weight in firing position.....	4,630 pounds
Weight of HE projectile.....	1.61 pounds
Rate of fire.....	160 to 180 rounds per minute
Elevation.....	-5 to 45 degrees
Traverse.....	360 degrees



57 MM AUTOMATIC ANTIAIRCRAFT GUN S-60

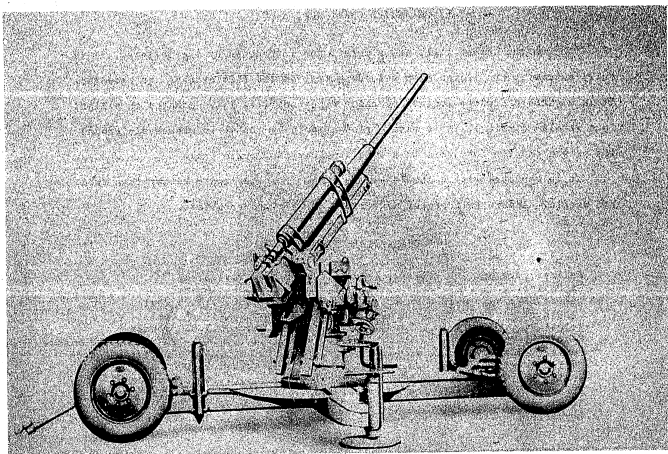
57-mm ANTIAIRCRAFT GUN, S-60

This is the latest light antiaircraft gun introduced by the Soviets. It is fully automatic and is fed from a loading tray on the left side of the receiver. It is capable of remote control by radar fire control units. Mounted on a light four wheeled carriage, it is easily recognizable by the three crew seats around the breech and the long thin tube with a pepper pot muzzle brake.

It is equipped with a shield and is fired from outriggers rather than from its wheels. A twin self propelled version of this weapon exists.

CHARACTERISTICS

Caliber.....	57-mm
Operation.....	Recoil
Length of tube w/muzzle brake.....	15.25 feet
Length of tube w/o muzzle brake.....	11.9 feet
Weight.....	7,840 pounds
Rate of fire.....	105-120 rounds per minute
Muzzle velocity.....	3,450 feet per second
Maximum vertical range.....	24,000 feet
Maximum horizontal range.....	11,000 yards
Effective antiaircraft range.....	15,000 feet
Elevation.....	+10 to +90 degrees
Traverse.....	360 degrees



76MM ANTIAIRCRAFT GUN M-1938

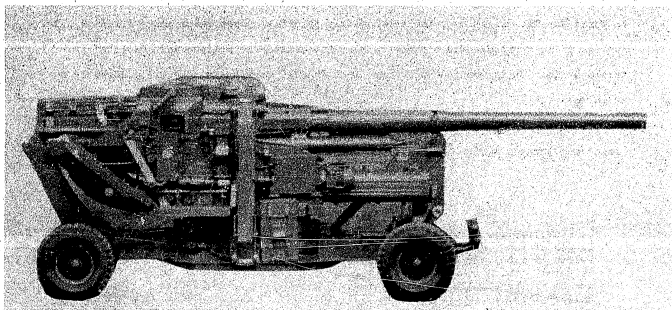
100mm ANTIAIRCRAFT GUN M-1949

This piece was designed to replace the 85mm anti-aircraft gun which was the standard in World War II. Fire is controlled remotely by off-carriage radar and a director. The gun itself is equipped with a power rammer, automatic fuse setter, and multi-baffle muzzle brake. It is mounted on a heavy four-wheeled carriage and normally towed by a prime mover, M1950.

It is easily recognizable by the large mass of control equipment surrounding the breech and the two horizontal equilibrators extending forward of the shield.

CHARACTERISTICS

Caliber.....	100mm
Length of tube, w/muzzle brake.....	221 inches
Length of tube, w/o muzzle brake.....	197 inches
Weight in firing position.....	24,250 lbs.
Weight in traveling position.....	33,069 lbs.
Rate of fire.....	20 - 24 rounds per minute
Muzzle velocity.....	3200 feet per second
Maximum vertical range.....	50,000 feet
Effective AA range.....	35,000 feet
Elevation.....	5° to 82°
Traverse.....	360°

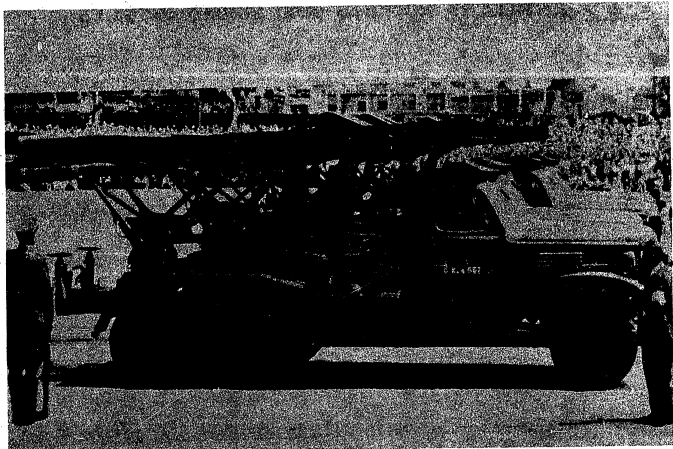


122 MM ANTI-AIRCRAFT GUN MI955

ARTILLERY ROCKETS AND GUIDED MISSILES

During World War II the Soviet Army employed solid fuel rockets on a larger scale than any other army. Their major opponent, the German Army, to a great extent, also utilized field artillery rocket launchers, towed and self-propelled. Originally Soviet artillery rocket launchers were all multi-round short-range-type employed in area saturation fire. Although the truck-mounted launcher was preferred, the static ground mount was often used.

Since the war the Soviets have revamped their entire rocket weapons system. A series of truck-mounted and tracked multi-round launchers have appeared, firing improved rockets. Longer range types have also been seen. Finally in 1957 there appeared two types of unguided one-round artillery rockets similar to the United States Honest John, but mounted on tracked vehicles. Surface-to-surface, and surface-to-air guided missiles, including self-propelled models have also made their appearance.



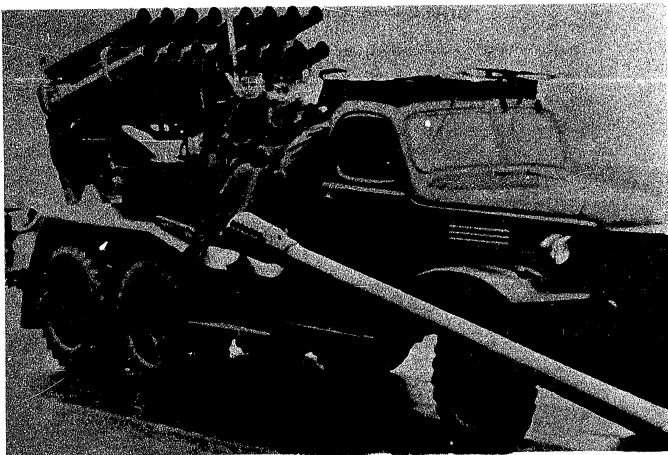
132 MM (16 ROUND) ROCKET LAUNCHER M-13

132-mm (16-Round) ROCKET LAUNCHER M-13

This is a basic field rocket launcher of the Soviet Army and is still found in many organizations although it is being replaced by the BM-14. It was mounted on various vehicles during World War II and is shown here on its present standard mount, the 6 x 6 truck. The rockets are fired electrically from the cab. The launcher is laid roughly by moving the vehicle and is sighted by a simple panoramic artillery sight on the left of the mount. For firing, the two jacks at the rear of the truck are lowered to help absorb the shock.

CHARACTERISTICS

Caliber.....	132-mm
Number of rails.....	8
Number of rockets.....	16
Total traverse.....	10 to 20 degrees
Horizontal range.....	9,846 yards
Weight of rocket.....	93.7 lbs.
Fire control device.....	Panoramic sight
Maximum velocity (HS Model RS-132).....	1,148 feet per second
Time to reload.....	6 to 10 minutes
Elevation limits.....	+15 to +45 degrees
Mount.....	ZIS-151 truck or Studebaker



140 MM (16 TUBE) ROCKET LAUNCHER BM-14

140-mm (16-Tube) ROCKET LAUNCHER BM-14

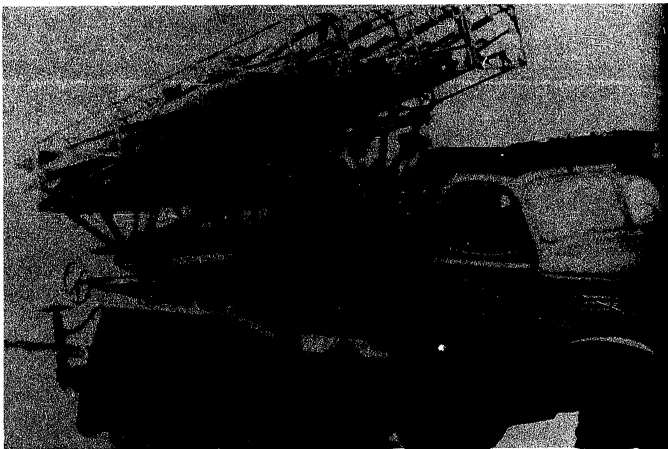
This is a multiple tube launcher mounted on a ZIS-151 truck chassis. Special equipment for the truck includes firing jacks on the rear to help absorb the shock of firing and a steel shield for the windshield and side windows on the cab. This shield is folded up on top of the cab when not in use. The crew rides on seats provided between the cab and the launcher proper.

The rockets are fired electrically and are utilized in salvo firing for saturation type coverage. Elevation and traverse of the launching frame is manual with possible power assist.

This piece is recognized by its 16 small tubes situated in 2 banks of 8 tubes each.

CHARACTERISTICS

Caliber.....	140-mm
Number of rounds.....	16
Stabilization.....	Fin
Length of launching tubes.....	4.5 feet
Total traverse.....	360 degrees
Range.....	9,000 yards
Fire control.....	Panoramic artillery sight
Mount.....	ZIS-151 truck



200 MM (4-ROUND) ROCKET LAUNCHER

200-mm (4-Round) ROCKET LAUNCHER

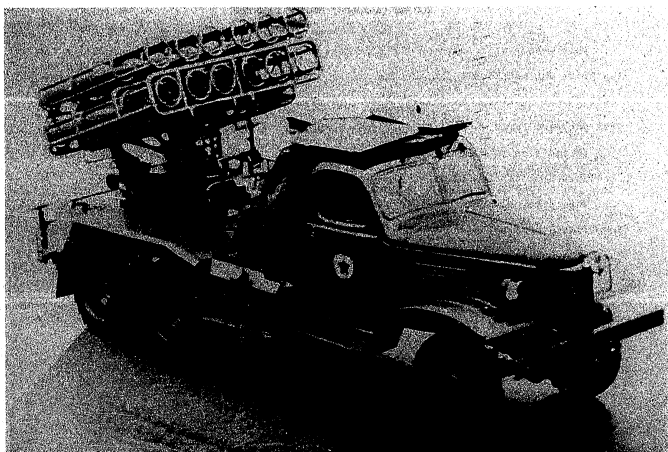
This weapon is mounted on the same truck as the 140-mm BM-14, and accessories for the truck are identical. Unlike the 140-mm BM-14, the new 200-mm weapon utilizes open crate launching frames with guide rails spiraled to give the rockets a right-hand spin when they are fired. These frames, four in number, are arranged in a single bank.

In addition to being quite long (approximately ten feet), the four-finned rocket fired by this launcher is streamlined and fin-spin stabilized.

This piece may be recognized by the four large square launching frames which are constructed of steel rods and the long ballistically shaped rockets which are carried in the launching frames.

CHARACTERISTICS

Caliber.....	200-mm
Number of rounds.....	4
Stabilization.....	Spin-fin
Length of launching rails.....	10 feet
Total traverse.....	360 degrees
Range.....	22,000 yards
Fire control.....	Panoramic artillery sight
Mount.....	ZIS-151 truck



240 MM (12-ROUND) ROCKET LAUNCHER BM-24

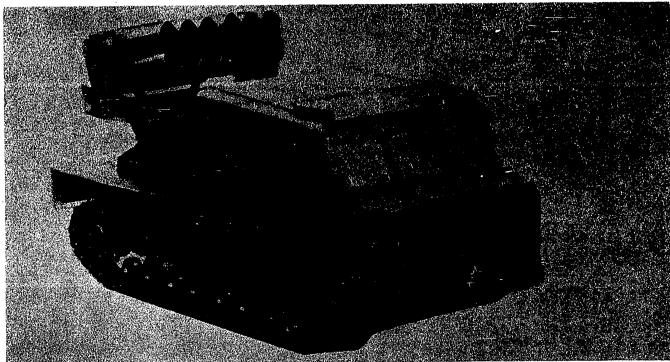
240-mm (12 Round) ROCKET LAUNCHER BM-24

This piece is mounted on the same truck as the 140-mm (16-Tube) BM-14, and the 200-mm (4-Round) Rocket Launcher. It is, like the 200-mm weapon, an open crate type. The launching frames, however, are twelve in number arranged in two banks of six frames each. Neatly and compactly constructed, this launcher is apparently equipped with elevation and traversing mechanisms designed to improve accuracy. It fires, electrically, a spin stabilized rocket to a range of approximately 10,000 yards. Rocket spin is induced by angled venturi in the base of the round. The weapon is employed for salvo fire for greater area coverage.

It may be recognized by the twelve large rockets which resemble conventional artillery projectiles.

CHARACTERISTICS

Caliber.....	240-mm
Number of rounds.....	12
Stabilization.....	Spin
Length of launching rails.....	6.6 feet
Total traverse.....	360 degrees
Range.....	10,000 yards
Fire control.....	Panoramic artillery sight
Mount.....	ZIS-151 truck



240 MM (12-TUBE) ROCKET LAUNCHER ON TPM M1954

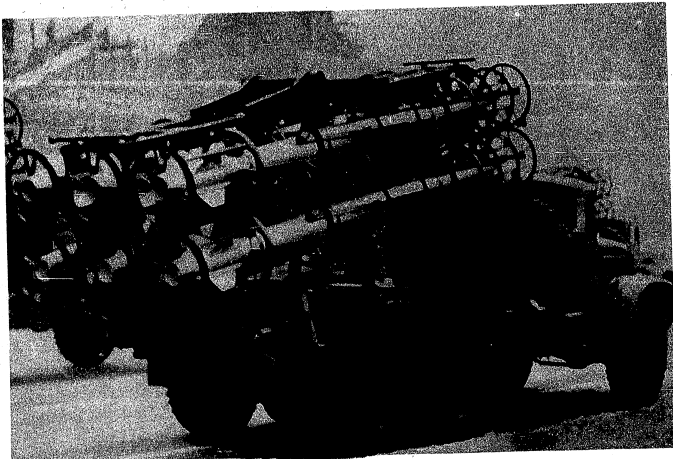
156.1

**240mm (12-TUBE) ROCKET LAUNCHER
ON TRACKED PRIME MOVER M1954**

In 1957 the Soviets displayed their first track-mounted self-propelled multi-round rocket launcher. The caliber is the same as the truck-mounted 240mm (12-round) BM-24. However, the tracked version employs launching tubes instead of launching frames. The chassis is a modified version of the proven medium Tracked Prime Mover M1945.

The introduction of this tracked rocket launcher now gives the Soviets the capability of more closely integrating the roles of tanks, other armored vehicles, and the area saturation fires of the multi-round rocket launchers.

156.2



ROCKET LAUNCHER (6 ROUNDS)

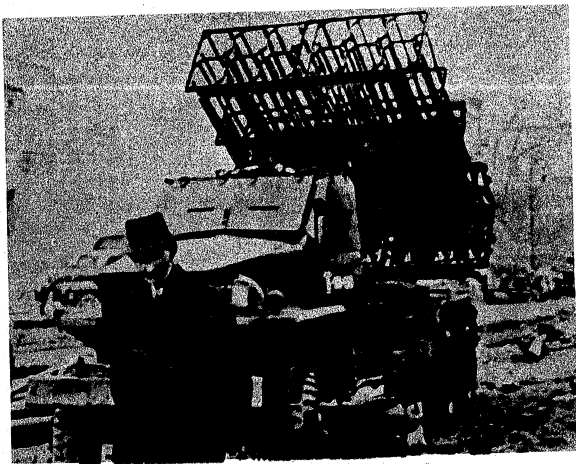
156.3

ROCKET LAUNCHER (6-ROUND)

This truck-mounted launcher fires the largest Soviet conventional multi-launched rocket. The 17-foot long rocket is fin-stabilized, with spin imparted by the launching frame very much in the fashion of the 200mm (4-round) rocket launcher. The truck used for the 6-round rocket launcher is a modified version of the YaAZ-210, called the YaAZ-214.

This is a very distinctive truck-mounted rocket launcher. It is the only 6-round weapon, and the only one mounted on this type of truck.

156.4



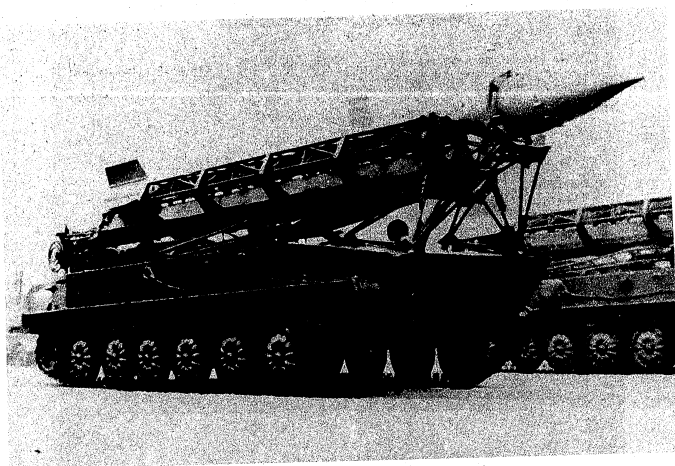
300 MM (12-ROUND) ROCKET LAUNCHER M-31

300-mm (12-Round) ROCKET LAUNCHER M-31

This weapon was used extensively in World War II. It has only about one-half the range of the M-13, but this disadvantage is offset by its ability to deliver approximately six times as much explosive per rocket.

CHARACTERISTICS

Caliber.....	300-mm
Number of rails.....	12
Number of rockets.....	12
Total traverse.....	20 degrees
Horizontal range: TS-31.....	4,750 yards
TS-52.....	4,374 yards
Weight of rocket.....	201.72 pounds
Fire control device.....	Panoramic sight
Time to reload.....	15 minutes
Elevation limits.....	+10 to +50 degrees
Mount.....	ZIS-151 or Studebaker

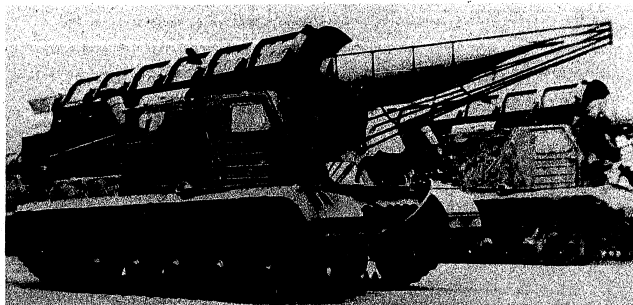


ARTILLERY ROCKET (AMPHIBIOUS CHASSIS)

ARTILLERY ROCKET (AMPHIBIOUS CHASSIS)

This is an unguided artillery rocket, of approximately 15 miles range, carried on and launched from an amphibious tracked vehicle similar to the chassis of the Amphibious Tank (see pages 215 & 216). The same type of chassis is also used for the Amphibious Armored Personnel Carrier. The nearest United States equivalent to this artillery rocket is the Honest John, which, however, is truck-mounted.

This artillery rocket can be recognized by the amphibious chassis, and the characteristic bulbous nose rocket with its very small diameter shaft. The vehicle holds a crew of three men, including the driver.



ARTILLERY ROCKET (JS CHASSIS)

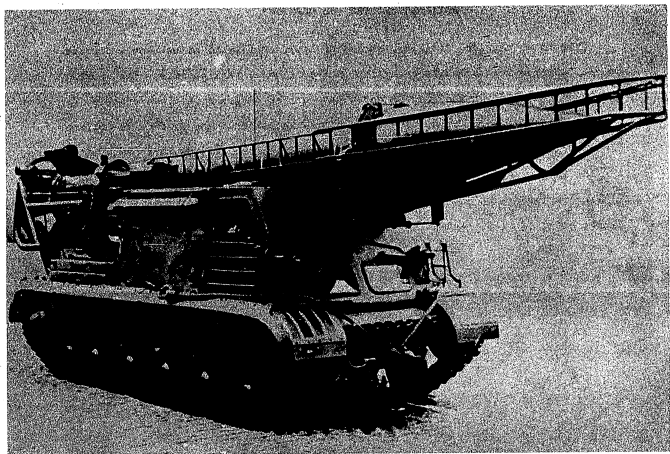
159.2

ARTILLERY ROCKET (JS CHASSIS)

This is an unguided artillery rocket of approximately 50 miles range, carried on and launched from a modified version of the JS heavy tank chassis. The rocket is a larger version of the bulbous nose type carried on the amphibious chassis.

Care must be taken in differentiating this weapon from the Surface-to-Surface Missile (JS Chassis) which is similar in general appearance. The large bulbous nose, and the large open-ended heating jacket over the shaft of the rocket are distinguishing features. In addition the base of the rocket is equipped with several large fins protruding from the heating jacket.

159.3



SURFACE TO SURFACE MISSILE (JS CHASSIS)

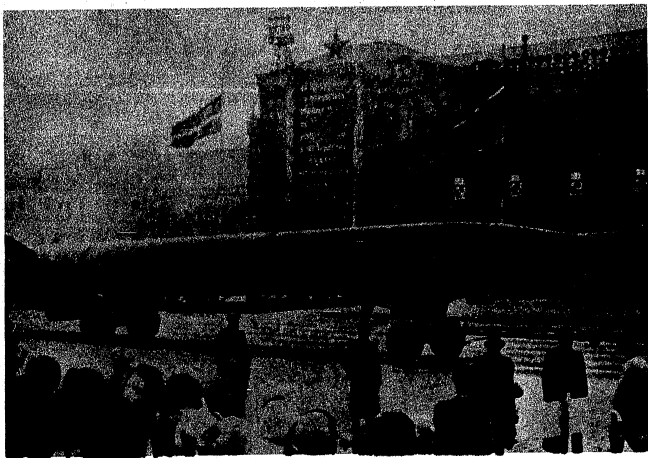
159.4

SURFACE-TO-SURFACE MISSILE (JS CHASSIS)

This is a vertically launched guided missile carried on a modified version of the JS heavy tank chassis. Although the chassis is the same as that used for the artillery rocket (JS chassis) the missile is entirely different. The nearest United States equivalent missile is the Corporal.

Care must be taken in differentiating this weapon from the Artillery Rocket (JS Chassis) which is similar in appearance. The cigar-shaped missile is quite different and has only four small fins.

159.5



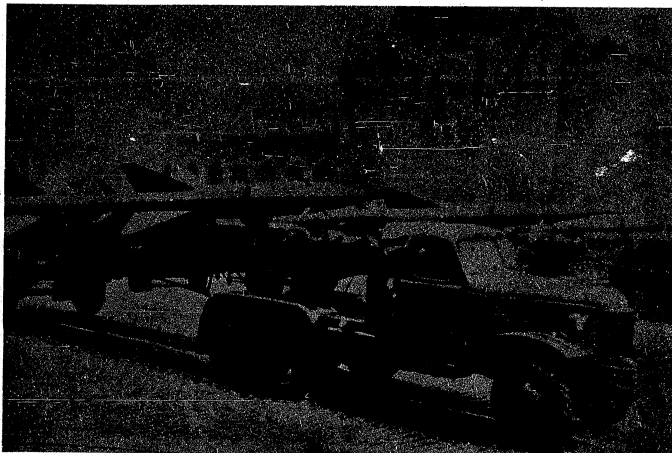
SURFACE TO SURFACE MISSILE (REDSTONE TYPE)

159.6

SURFACE-TO-SURFACE MISSILE (REDSTONE-TYPE)

This is a vertically launched guided missile of approximately 300 miles range, similar to the United States Redstone. It is a long cigar-shaped missile with four very small fins at the base. It has been seen towed by the heavy Tracked Prime Mover M1950 on a special two-axle trailer.

159.7



SURFACE TO AIR MISSILE (NIKE TYPE)

159.8

SURFACE-TO-AIR MISSILE (NIKE-TYPE)

This is a guided surface-to-air missile similar to the United States Nike-Ajax. It is a long two-stage missile with two sets of large fins, plus smaller fin-like antenna. It has been seen towed on a semitrailer by a modified ZIS-151 truck-tractor.

159.9

TANKS

At present the standard Soviet medium tank is the T-54. It is replacing the older T-34(85). In addition there is the T-44, an interim tank, which is encountered occasionally. The standard heavy tank is the JS-3. However, the older JS-2 is still present in large numbers. In 1957 the Soviets displayed a new heavy tank similar in appearance to the JS-3.

In the light tank field an Amphibious Tank has made its appearance. This vehicle is treated under the heading of Amphibious Vehicles (pages 215-216).



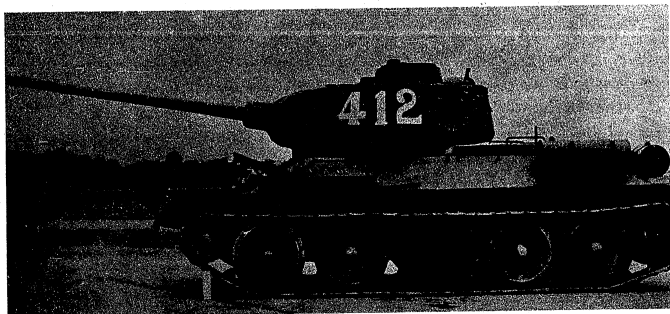
MEDIUM TANK T-34 (76)

MEDIUM TANK T-34(76)

This is the original Soviet medium tank. It first appeared in 1941 and was considered to be one of the best tanks in use at that time. Its original armament was a 76-mm gun which was twenty-nine calibers long. This gun was later replaced with a 76-mm tank gun M1940 (F-34), thirty-nine calibers long. This tank has the greatest spacing of road wheels between the second and third road wheel. It carries the drum type external fuel tanks. It is equipped with a cast turret. Although this model is considered obsolete, it is still encountered in some Soviet units and in the hands of the satellites.

CHARACTERISTICS

Vehicle	Armament
Weight (combat loaded)....30.5 tons	Primary armament.....76-mm gun
Crew.....4	Traverse.....360 degrees
Height.....7 feet 10 inches	Elevation limits.....-3 to +30 degrees
Width.....5 feet 10 inches	No. rounds carried.....77 rounds
Length.....20 feet	Max. armor penetration
Width of track.....19.8 inches	(500 yards).....2.95 inches
Armor thickness: Hull.....1.8 inches @ 60°	Secondary armament.....Two 7.62-mm DT MG's
Turret.....2.6 inches rounded	
Maximum speed.....35 miles per hour	
Cruising range:	
Paved road.....190 miles	
Earth road.....150 miles	
Fording depth.....4 feet 3 inches	
Engine.....V-12 Diesel 500 HP	
Ground pressure.....9.3 PSI	
Suspension.....Christie	
No. of road wheels.....5	



MEDIUM TANK T-34 (85)

MEDIUM TANK T-34(85)

The T-34 (85) became the standard Soviet medium tank in the summer of 1944. The excellent combat qualifications of this vehicle were demonstrated on many occasions during World War II. This vehicle is now being replaced by the T-54, but may be still found in large numbers in both the Soviet as well as satellite armies.

Recognition features: long tube without muzzle brake; curved gun mantlet; slight sloping turret sides; cupola on top of turret; two cylindrical auxiliary fuel tanks on each side and five double road wheels with no track support rollers (Christie suspension). The main armament consists of an 85-mm tank gun and as secondary armament one ball mounted and one coaxial turret-mounted machine gun.

CHARACTERISTICS

Vehicle	Armament
Weight.....35.2 tons	Primary armament.....85-mm gun
Crew.....5 men	Traverse.....360 degrees
Height.....7 feet 11 inches	Elevation limits.....-5 to +25 degrees
Width.....9 feet 10 inches	Range.....10,498 yards
Length.....19 feet 8 inches	Rounds carried.....56 rounds
Armor thickness:	Armor penetration
Hull.....1.8 inches	500 yards.....5.4 inches
Turret.....3.5-4 inches	Secondary armament.....Two 7.62-mm DT MG's
Maximum speed.....35 miles per hour	
Cruising range.....190 miles	
Fording depth.....4 feet 3 inches	
Engine.....V-12 Diesel 493HP @ 1800 rpm	
Ground pressure.....11.4 PSI	



MEDIUM TANK T-44

MEDIUM TANK T-44

The T-44 was to be the replacement for the T-34 (85). This tank differs from the T-34 (85) by its larger and more heavily sloped turret, location of driver's hatch, the vertical upper hull side plate, the hull machine gun which fires through a hole flush with the front glacis plate, and the spacing of the road wheels. (The greatest space on the T-34 (85) being between the second and third, while it is between the first and second on the T-44).

CHARACTERISTICS

Vehicle	Armament
Weight.....25 tons	Primary armament.....85-mm gun
Crew.....4	Traverse.....360 degrees
Height.....7 feet 11 inches	Rounds carried.....58
Width.....10 feet 2 inches	Secondary armament.....Two 7.62-mm MG's
Length.....19 feet 11 inches	
Armor: Hull.....3.54 inches	
Turret.....4.72 inches	
Maximum speed.....32 miles per hour	
Suspension.....Christie	
Number of road wheels...5	



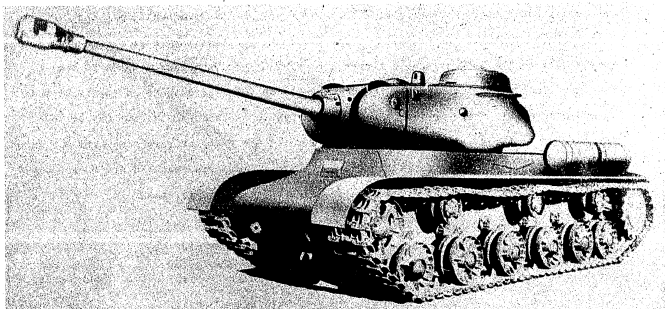
MEDIUM TANK T-54

MEDIUM TANK T-54

There is the new Soviet medium tank, which replaces the T-34 and T-44 medium tanks. It has a much smoother design than either of its two predecessors. The main armament on this tank is 100-mm. The old drum-type auxiliary fuel tanks which were always on the T-34 have been replaced by streamlined tanks and mounted on the fenders. The greatest spacing of the road wheels on the T-54 is between the first and second road wheel, while on the T-34 it is between the second and third. One of the identifying features is the low rounded turret. It has an antiaircraft machine gun which can be mounted on the top of the turret. This tank has a much improved armor design and better performance characteristics than any other previous Soviet tank.

CHARACTERISTICS

Vehicle	Armament
Weight.....39.7 tons	Primary armament.....100-mm gun
Crew.....4	Traverse.....360 degrees
Width.....10 feet 9 inches	Rounds carried.....34 rounds
Width of track.....22 inches	Secondary armament.....Two 7.62-mm MG's
Length.....19 feet 8 inches	
Height.....7 feet 10 inches	
Maximum speed.....30 miles per hour	
Cruising range.....224-249 miles	
Fording depth.....4 feet 7 inches	
Engine.....V-12 cylinder Diesel	
Ground pressure.....11.4 PSI	
Suspension.....Torsion bar	
Number of road wheels..5	



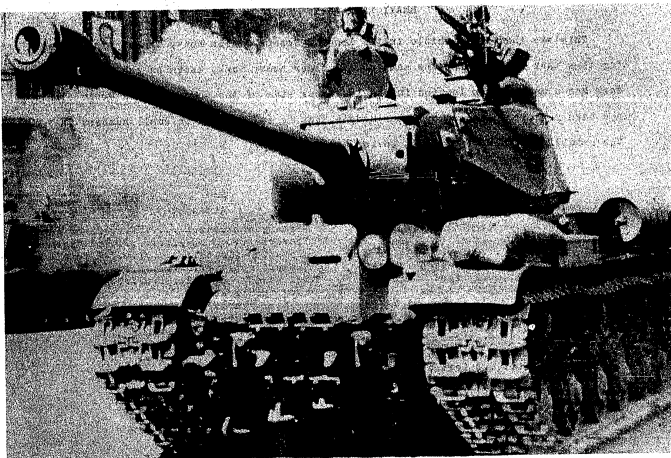
HEAVY TANK JS-1

HEAVY TANK JS-1

This was the first vehicle in the line of Joseph Stalin heavy tanks. The chassis for this tank is basically the same as the older heavy tank, known as the KV. This tank has a machine gun located in the left rear side of the turret. This vehicle has been rendered obsolete by later models, but is still found in small numbers in the satellites and possibly some Soviet armored units.

CHARACTERISTICS

Vehicle	Armament
Weight.....50 tons	Primary armament.....122-mm gun
Crew.....4	Traverse.....360 degrees
Height.....9 feet	Elevation limits.....-3 to +20 degrees
Width.....10 feet 3 inches	Range.....16,300 yards
Length.....21 feet 10 inches	No. rounds carried.....28 rounds
Width of track.....25 inches	Armor penetration
Armor: Hull.....3 inches at 74°	(500 yards).....5.9 inches
Turret.....4.13 in. at 50° stepped	Secondary armament.....Three 7.62-mm MG's
Maximum speed.....0.75-2.5 in. rounded	
Cruising range.....90 miles	
Fording depth.....4 feet 6 inches	
Engine.....V-12 Diesel	
Ground pressure.....11.4 PSI	
Suspension.....Torsion bar	
No. of road wheels...6	



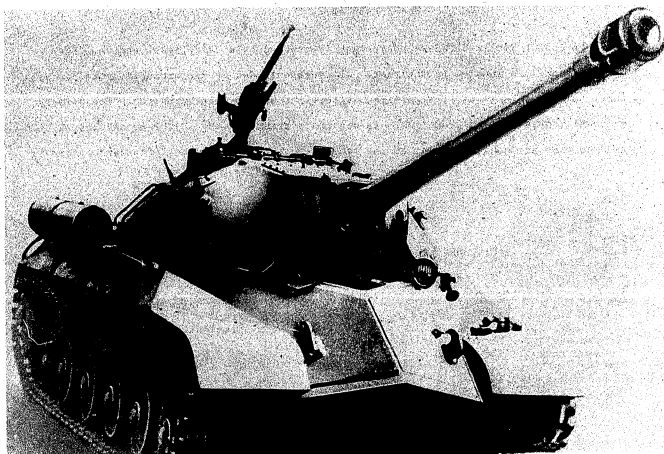
HEAVY TANK JS-2

HEAVY TANK JS-2

The Joseph Stalin-2 (JS-2) heavy tank is powered by a V-12 Diesel engine. The drive sprocket is located in the rear. Although outmoded by the production of the JS-3 tank, this vehicle is still significant within its weight classification. The primary armament consists of a 122-mm gun. As secondary armament, three 7.62-mm and one 12.7-mm machine guns are mounted. (One of the machine guns mounted in the left rear of turret).

CHARACTERISTICS

Vehicle	Armament
Crew.....4	Primary armament.....One 122-mm gun
Weight.....50.6 tons	Traverse.....360 degrees
Length (hull).....22 feet	Elevation limits.....-3 to +25 degrees
Width (overall)....10.2 feet	Range.....16,300 yards (approx)
Height.....9 feet	No. rounds carried....28
Armor:	Maximum armor penetration
Hull.....4.33 inches	(500 yards).....5.9 inches
Turret.....4.0 inches	Secondary armament....One 12.7-mm and three
Maximum speed.....23 miles per hour	7.62-mm MG's
Cruising range....156-180 miles	
Fording depth....4 feet 3 inches	
Ground pressure...11.1 PSI	
Engine.....V-12 cylinder Diesel	
512 hp at 2,000 rpm	



HEAVY TANK JS-3

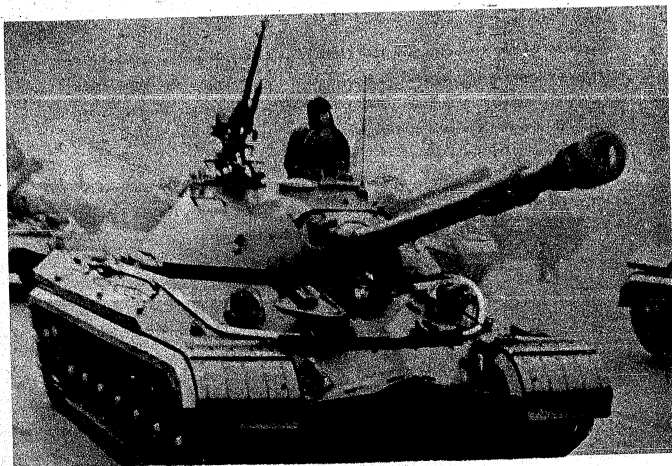
HEAVY TANK JS-3

The JS-3 tank, nicknamed "The Pike (Shchuka)," by Soviet troops because of its pointed bow (suggesting a fishhead), represents a completely new concept of armor layout and design. In this model, Soviet designers achieved their goal of obtaining maximum armor protection with minimum weight. The turret is almost circular, and resembles a turtle's domed shell.

The main armament consists of a modified 122-mm field gun, which has been adapted to armor usage. The secondary armament consists of a 12.7-mm machine gun mounted on top of the turret and a coaxially mounted 7.62-mm machine gun.

CHARACTERISTICS

Vehicle	Armament
Height.....8 feet	Primary armament.....One 122-mm gun
Length.....22 feet	Traverse.....360 degrees
Crew.....4 men	Elevation limits.....-5 to +20°
Weight.....50.6 tons	Range.....16,200 yards
Width.....10 feet	Rounds carried.....28 rounds
Armor:	Armor penetration
Hull.....4.72 in.	500 yards.....5.9 inches
Turret.....7.9 in.	Secondary armament.....One 12.7-mm &
Maximum speed.....23 miles per hour	One 7.62-mm DT MG
Cruising range.....150-180 miles	
Fording depth.....4 ft 3 in.	
Engine.....V-12 cylinders, diesel,	
512 HP at 2,000 rpm	
Ground pressure.....11.1 PSI	



NEW HEAVY TANK

NEW HEAVY TANK

In 1957 the Soviets displayed their new heavy tank. It unmistakably is a descendant of the JS-3 which has been used in the Soviet Army for over a decade. Although superficially resembling the JS-3 there are a number of important recognition differences between the new heavy and the older tank. Generally, the armor slope is more pronounced, and the lower side hull plates slant inward. The turret is larger and more massive than that of the JS-3, especially in the rear, which is higher and roomier. The 122mm gun is similar to that of the JS-3 (including muzzle brake), and can be distinguished by the presence of a bore evacuator just to the rear of the muzzle brake. The suspension is of the same type as that of the JS series, but because of the increased size of the tank an extra road wheel has been added, making a total of seven.

SELF-PROPELLED ARTILLERY AND ASSAULT GUNS

Although the Soviet assault guns date to the last half of World War II, the postwar era has brought out many new types of self-propelled artillery in the Soviet Army. This has been especially apparent in the field of antitank and antiaircraft guns. The year 1957 saw the appearance of superheavy self-propelled long range guns. Soviet nomenclature for self-propelled artillery, regardless of type, usually includes the letters "SU", meaning self-propelled, followed by a number which is the caliber of the gun in millimeters. Those SP weapons which are fully enclosed in armor and are mounted on a tank chassis are considered by the United States as assault guns.



14.5 MM HEAVY AA MACHINE GUN ZPU-2 ON BTR 152

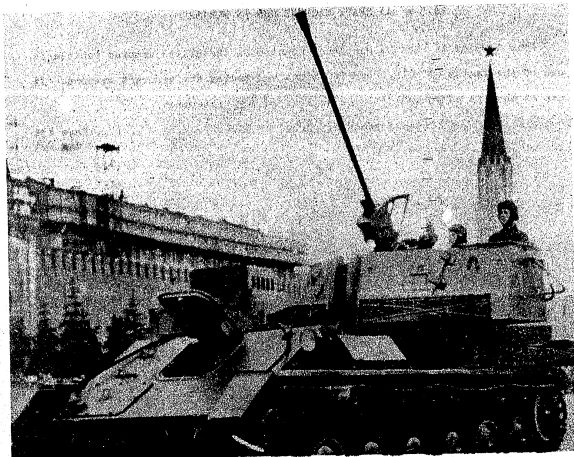
184.1

14.5-mm AA HEAVY MACHINE GUN ON BTR152

The 14.5-mm AA machine gun ZPU-2 mounted on the BTR152 armored vehicle is one of the family of self-propelled light and medium antiaircraft weapons. It can be used in an assault role as well as convoy protection.

For basic characteristics see: ZPU-2 AA MG.....Page 134
BTR152.....Page 206

184.2



37 MM AUTOMATIC ANTIAIRCRAFT GUN M1939 SP

37-mm AUTOMATIC ANTIAIRCRAFT GUN M1939, SELF-PROPELLED

This self-propelled weapon consists of the 37-mm antiaircraft gun M1939 mounted on a modified version of the obsolete T-70 light tank chassis. The gun is carried in a lightly armored superstructure on top of the vehicle and is mounted so as to give 360 degrees traverse. It is believed to be designed for the protection of moving columns as well as for normal antiaircraft roles. It has not, however, been identified with Soviet field units or in Satellite forces, and has been observed only at the Moscow parades in 1946.

CHARACTERISTICS

Vehicle	Armament
Crew.....4 men	Primary armament.....One 37-mm AA Gun
Weight.....12.1 tons	Traverse.....360 degrees
Width.....8.96 feet	Elevation limits.....-5 to +85 degrees
Frontal armor.....Inches .98	Maximum effective vertical range.....12,000 feet
Maximum speed.....28 miles per hour	Horizontal range.....8,784 yards
Cruising range.....224 miles	Rate of fire.....160 to 180 rounds per minute
Fording depth.....3 feet	
Engine.....Two 6-cylinder gasoline	



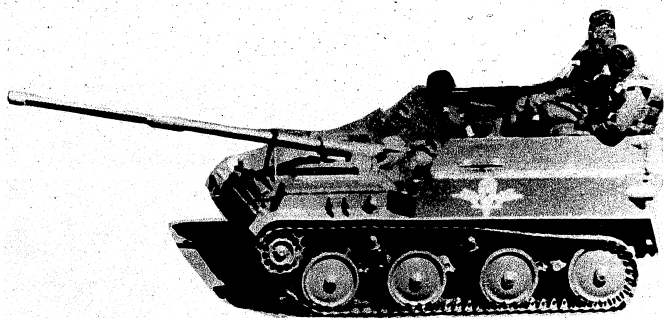
TWIN 57 MM AUTOMATIC ANTI-AIRCRAFT GUN SP

186.1

TWIN 57mm AUTOMATIC ANTI-AIRCRAFT GUN SELF-PROPELLED

In 1957 the Soviets introduced a new self-propelled automatic anti-aircraft gun, the twin 57mm mounted on a modified T-54 medium tank chassis. This vehicle is easily recognized by several distinctive features. In the first place the twin guns mark it off from other tanks and SP's. Secondly, the standard T-54 suspension has been modified by eliminating one road wheel and resacing the remaining four. The large open-topped four-man turret, is high and squarish in appearance, with a distinctive wire mesh basket mounted on its rear. Although massive in appearance the Twin 57mm AA SP is undoubtedly much lighter and more agile than the T-54 medium tank. The fire power developed by the twin 57mm guns is most respectable in both anti-aircraft and ground combat, with 105 to 120 rounds per minute per barrel coupled with the armor penetration of the 57mm antitank gun M1943.

186.2



45 MM SELF-PROPELLED ANTITANK GUN

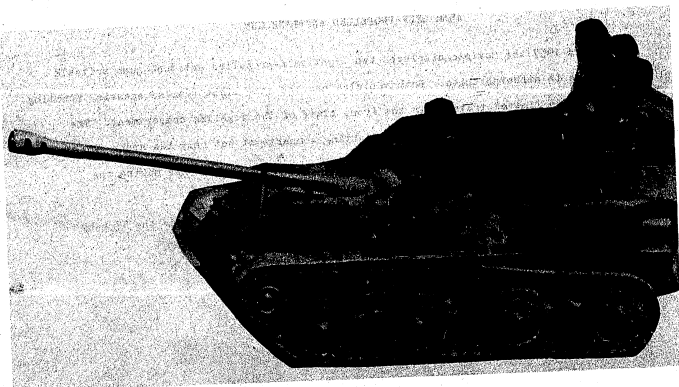
186.3

45mm SELF-PROPELLED ANTITANK GUN

In 1957 the Soviets displayed two light self-propelled antitank guns suitable for use in airborne units. Both vehicles had the same light tracked chassis, mounting a gun with limited traverse in the front plate of the fighting compartment. The small squarish open-topped armored fighting compartment not only has space for the three-man gun crew, but can also carry up to three extra men, thus making the vehicle an auxiliary APC.

The 45mm self-propelled antitank gun can be distinguished from the 57mm by the presence of the rather long multi-slotted muzzle device.

186.4



57 MM SELF-PROPELLED ANTITANK GUN

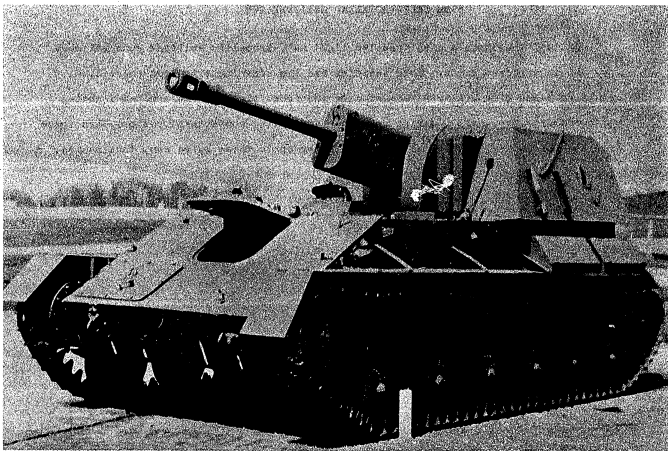
186.5

57mm SELF-PROPELLED ANTITANK GUN

In 1957 the Soviets displayed two light self-propelled antitank guns suitable for use in airborne units. Both vehicles had the same light tracked chassis, mounting a gun with a limited traverse in the front plate of the armored fighting compartment. The small squarish open-topped fighting compartment not only has space for the three-man gun crew, but can also carry up to three extra men, thus making the vehicle an auxiliary APC.

The 57mm self-propelled antitank gun can be distinguished from the 45mm by the presence of the conventional double baffle muzzle brake which is used on many Soviet guns such as the 76mm Divisional Gun M1942 and the 122mm Tank Gun.

186.6



76 MM SELF-PROPELLED GUN M1942/43 (SU-76)

76-mm SELF-PROPELLED GUN M1942/43

This is an adaptation of the 76-mm divisional gun M1942 (ZIS-3) to a self-propelled role. Originally the SU-76 was developed for a tank destroyer role. Shortly after its initial employment, it became evident that it was not powerful enough to combat the German heavy tanks. It continued, however, as a standard SP artillery piece, but was relegated to the role of supporting artillery organic to the rifle regiment.

Recognition features: Double-baffle muzzle brake; extension of mantlet housing recoil and recuperator mechanisms; four-sided pyramidal superstructure located on the rear part of the hull; six small, single rubber-tired road wheels and three small track support rollers.

CHARACTERISTICS

Vehicle

Crew.....4 men
Weight.....12.3 tons
Width.....9 feet
Armor thickness......98 inches
Maximum speed.....28 miles per hour
Cruising range.....224 miles
Fording depth.....3 feet
Engine.....Two 6-cylinder, gasoline
140 HP each

Armament

Primary armament.....one 76-mm gun
Traverse.....30 degrees
Elevation limits.....-5 to +15 degrees
Range.....14,545 yards
No. of rounds carried.....60 rounds
Max. armor penetration
@ 550 yards.....3.62 inches



ASSAULT GUN SU-85

ASSAULT GUN SU-85

This weapon represents the first attempt to combine the 85-mm antiaircraft gun with the T-34 tank chassis. It consists of an adaptation of the 85-mm antiaircraft gun M1939 (less muzzle brake) to a self-propelled assault role, to be used primarily as a tank destroyer.

This gun, which is ballistically almost identical with its parent antiaircraft piece, is mounted in a well-armored and well-sloped superstructure.

CHARACTERISTICS

Vehicle

Crew.....4 men
Weight.....32.5 tons
Width.....10 feet
Armor thickness...1.8 inches
Maximum speed...35 miles per hour
Cruising range...190 miles
Fording depth...4 feet 3 inches
Engine.....V-12 cylinders, Diesel
493 hp at 1,800 rpm

Armament

Primary armament.....One 85-mm gun (DS-85)
Traverse.....20 degrees
Elevation limits.....-5 to +25 degrees
Range.....10,498 yards
Rounds carried.....48 rounds
Armor penetration
(500 yards).....5.4 inches



ASSAULT GUN SU-100

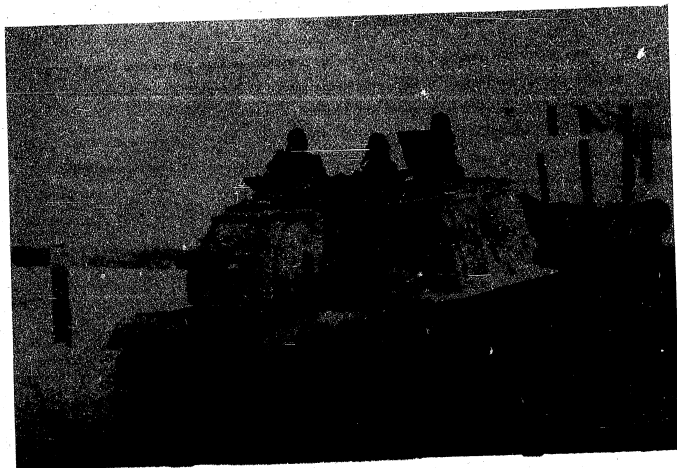
ASSAULT GUN SU-100

The SU-100 has replaced the SU-85 as the standard assault gun of the Soviet army. Because of its combination of high armor penetration with mobility and substantial armor protection, it is outstanding as an antitank or assault gun.

The SU-100 consists of an adaptation of the 100-mm field (antitank) gun M1944 (BS-4) on the T-34 medium tank chassis. It is basically identical to its towed counterpart. The superstructure generally is similar in appearance to that of the SU-85; main differences are the gun tube, different shaped gun mantlet, the use of a circular cupola which is flaired into the side of the superstructure, and other minor details.

CHARACTERISTICS

Vehicle	Armament
Crew.....4 men	Primary armament.....One 100-mm M1944 (D-10S)
Weight.....33.1 tons	Traverse.....32 degrees
Length.....19.7 feet	Elevation limits.....-2 to +17 degrees
Width.....10 feet	Range.....15,316 yards
Height.....7.5 feet	Rounds carried.....34 rounds
Frontal armor.....3.0 inches at 90°	Armor penetration
Maximum speed.....35 miles per hour	(500 yards).....6.1 inches
Cruising range.....190 miles	
Fording depth.....4.4 feet	
Engine.....V-12 cylinders, Diesel	
	495 HP @ 1,800 rpm



ASSAULT GUN JSU-122 (A-19S)

ASSAULT GUN JSU-122 (A-19S)

This consists of the 122-mm corps gun M1931/37 (A-19S), adapted to a self-propelled assault role by mounting it on the chassis of the Joseph Stalin heavy tank. While giving excellent performance as a flat-trajectory field gun, it is inferior in armor penetration to the 100-mm gun of the SU-100. Small numbers have been reported in the hands of Polish and Hungarian troops, who have been provided with surplus specimens for training purposes.

The weapon, which has the same chassis and superstructure as the JSU-122 (D-25S) and JSU-152, is distinguishable from these mainly by the absence of a muzzle brake.

CHARACTERISTICS

Vehicle	Armament
Weight.....51 tons	Primary armament.....One 122-mm gun
Crew.....5 men	M51/44 (A-19S)
Height.....8 feet 3 inches	Traverse.....11 degrees
Width.....10 feet 3 inches	Elevation limits.....-4 to +15 degrees
Length.....22 feet 4 inches	Range.....16,410 yards
Armor.....3.8 inches	Rounds carried.....30 rounds
Maximum speed.....23 miles per hour	Armor penetration
Cruising range.....156-180 miles	550 yards.....6.18 inches
Fording depth.....4.25 feet	Secondary armament.....One 12.7-mm AA MG
Engine.....V-12 Diesel	
512HP @ 2000 rpm	



ASSAULT GUN JSU-122 (D-25S)

ASSAULT GUN JSU-122 (D-25S)

This is basically the 122-mm tank gun M1943 (D-25S), used on all Soviet JS heavy tanks, but here adapted for use as an assault artillery piece. It is ballistically identical with the tank-mounted version but is slightly shorter and with lower muzzle velocity than the 122-mm self-propelled gun M1944 (A-19S).

The JSU-122 (D-25S) consists of this adapted tank gun mounted on the chassis of the JS heavy tank, with the same type of superstructure as the JSU-122 (A-19S), and JSU-152. Although almost identical to the JSU-122 (A-19S), this SP can be visibly identified in that: (1) the gun is fitted with a double-baffle muzzle brake; and (2) the gun mantlet on the bottom is more rounded.

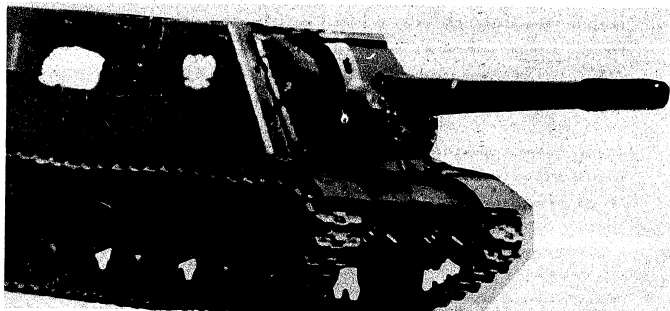
CHARACTERISTICS

Vehicle

Crew.....5 men
Weight.....51.2 tons
Width.....10 feet
Armor.....3 inches front
Maximum speed.....23 miles per hour
Cruising range.....156 to 180 miles
Fording depth.....4.25 feet
Engine.....V-12 cylinder, Diesel
512 HP at 2,000 rpm

Armament

Primary armament.....One 122-mm gun (D-25S)
Traverse.....11 degrees
Elevation limits.....-4 to +15 degrees
Range.....16,410 yards
No. of rounds carried...30 rounds
Maximum armor penetration
(500 yards).....5.9 inches
Secondary armament.....One 12.7-mm AA MG



ASSAULT GUN JSU-152

ASSAULT GUN JSU-152

This is the largest caliber self-propelled assault artillery piece in the Soviet Army. The weapon consists of the 152-mm gun-howitzer M1937 adapted to a self-propelled role by mounting it on the Joseph Stalin heavy tank chassis. It is readily distinguished from the JSU-122 (A-19S) and the JSU-122 (D-25S) by its 12-baffle muzzle brake and its larger caliber, howitzer-type tube.

It differs from an earlier version, mounted on a KV tank chassis and designated the SU-152, by having a somewhat higher and less sharply sloped superstructure.

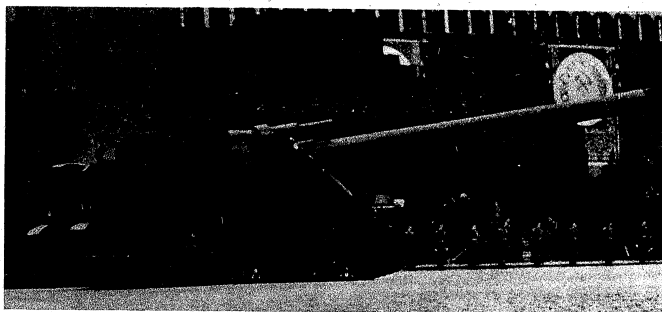
CHARACTERISTICS

Vehicle

Crew.....5 men
 Weight.....51 tons
 Width.....10 feet
 Armor.....4.0 inches
 Maximum speed.....23 miles per hour
 Cruising range.....156-180 miles
 Fording depth.....4.25 inches (estimated)
 Engine.....V-12 Diesel
 592HP @ 2000 rpm

Armament

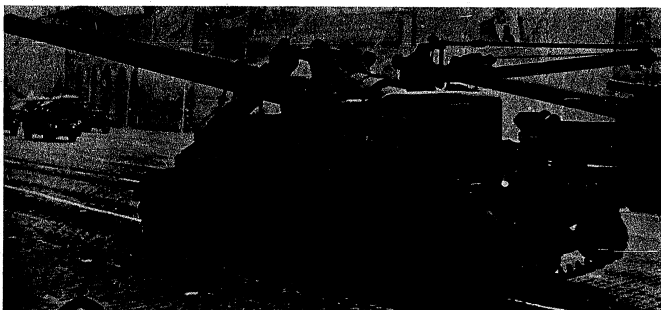
Primary armament.....One 152-mm gun M31/43
 Traverse.....10 degrees
 Elevation limits.....-3 to +20 degrees
 Range capability.....18,680 yards
 Rounds carried.....20 rounds
 Armor penetration
 500 yards.....5.2 inches
 Secondary armament.....One 12.7-mm MG



SUPER-HEAVY SELF-PROPELLED GUN (CONVENTIONAL)

**SUPERHEAVY SELF-PROPELLED GUN
(CONVENTIONAL TYPE)**

In 1957 the Soviets displayed two new superheavy self-propelled guns mounted on a lengthened and modified JS heavy tank chassis. Both guns, of approximately 300mm in caliber, were mounted muzzle to the rear. The "Conventional Type" has a normal looking recoil system. The large caliber of this piece makes it capable of delivering an atomic warhead to a target more than 30 miles away. The employment of rocket assisted projectiles like those used by the Germans in their superheavy railway guns in World War II, would increase this range greatly.



SUPER-HEAVY SELF-PROPELLED GUN (UNCONVENTIONAL)

199.2

**SUPERHEAVY SELF-PROPELLED GUN
(UNCONVENTIONAL TYPE)**

In 1957 the Soviets displayed two new superheavy self-propelled guns mounted on a lengthened and modified JS heavy tank chassis. Both guns, of approximately 300mm in caliber, were mounted muzzle to the rear. The "Unconventional Type" is marked by the absence of a visible recoil system. This type of weapon may employ either a rocket or ramjet projectile, resulting in a very long range (50 to 100 miles) delivery of an atomic warhead.

199.3

WHEELED ARMORED VEHICLES

Prior to World War II, the chief Russian effort in the sphere of armored cars was in the direction of modifying and improving vehicles purchased from other countries.

Two armored cars that were developed during this period were the six wheeled BA-10 and the four wheeled BA-20. The former remained in service throughout World War II, the latter being substantially modified during 1943-44, and appeared in its new form under the name BA-64.

Since 1950, two new armored personnel carriers have made their appearance. They are multipurpose vehicles with a lightly armored body.

Detailed description of armored cars will be found on the following pages.



BA-64 ARMORED CAR

ARMORED PERSONNEL CARRIER, BTR-152

This Soviet 6X6 multi-purpose armored vehicle was introduced in 1951. There is nothing very original in the design, but it does mark another step forward in the post-war re-equipment of the Soviet Army. Design features of the U.S. M3A1 and German World War II armored car Sd. Kfz. 231 obviously impressed the Soviets, since the new vehicle reflects features employed on both.

A versatile vehicle, it is employed as a personnel carrier, C&R vehicle, prime mover for mortars and light artillery, and a mount for heavy antiaircraft machine guns.

CHARACTERISTICS

Crew.....	2
Weight.....	7 tons (approximate)
Payload.....	12 passengers
Length, overall.....	22 feet 1 inch
Height.....	6 feet 7 inches
Width.....	7 feet 6 inches
Armor thickness.....	From 1/4 to 5/8 inch
Horsepower.....	90 HP @ 2,700 rpm
Engine.....	6 cylinders, in-line, gasoline

AMPHIBIOUS VEHICLES

One of the significant postwar developments in Soviet equipment has been the introduction of a large line of versatile combat and non-combat, tracked and wheeled, amphibious vehicles. In the wheeled vehicles there are both a 4x4 amphibious jeep and a 6x6 amphibious truck. In the tracked field there are the Amphibious Armored Personnel Carrier and the Amphibious Tank (both using the same chassis), the K-61 carrier, and the Cross Country GAZ-47. All of these vehicles have excellent characteristics which make them well-suited for their operations.



AMPHIBIOUS JEEP MAV 69

AMPHIBIOUS JEEP MAV-69

This vehicle is almost an exact copy of the US Model used during World War II. This vehicle is 4 wheel drive. It uses a large 3 bladed propeller located in the middle of the rear of the vehicle for propulsion in water. The spare tire is mounted on the rear deck. It has a two section windshield. The top is canvas, with curtains which cover the sides of the passenger compartment. There are two headlights and a ventilating hatch mounted on the front deck.

CHARACTERISTICS

Weight.....	2.5 tons
Length.....	15 ft 1 in.
Width.....	5 ft 4 in.
Height.....	5 ft 7 in.
Speed: Land.....	60 mph
Water.....	5.5 mph
Engine.....	6 cyl GAZ
Payload cargo.....	800 pounds
Passengers.....	4
Ground clearance.....	12 inches



CROSS COUNTRY VEHICLE GAZ-47

210.1

CROSS-COUNTRY VEHICLE GAZ-47

The GAZ-47 is a light, full-tracked vehicle, designed to carry cargo and personnel cross country. It has a two seater closed cab and a metal hermetical body. The cargo space is covered with canvas. This vehicle is equipped with a heating system both in the cab and the rear. It is also amphibious and can attain a speed of 3.1 miles per hour in water and is propelled by the tracks. A trailer or sled can be towed behind this vehicle. The vehicle has torsion bar suspension. It can be used to tow light artillery.

CHARACTERISTICS

Weight.....	7950 pounds
Length.....	16 feet 1 inch
Width.....	7 feet
Height.....	6 feet 5 inches
Speed: Land.....	16 miles per hour
Water.....	3.1 miles per hour
Engine.....	6-cyl in-line "I" head 70 HP
Payload cargo.....	2200 pounds or 9 passengers
Ground clearance.....	16 inches
Ground pressure.....	2.5 psi

210.2



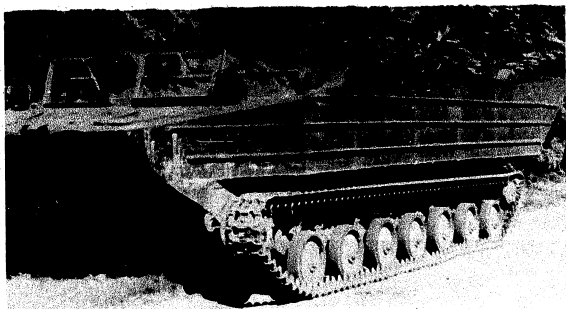
6X6 WHEELED AMPHIBIAN BAV

6X6 WHEELED AMPHIBIAN BAV

This is a copy of the US 6x6 amphibious vehicle which was used during World War II. The Soviets have made a small number of modifications on this vehicle. The rear of the vehicle has been extended giving a larger cargo space and a large tail gate has been added. It has 3 axles with power going to all three. Water propulsion is by a large 3 bladed propeller located in the center at the rear of the vehicle. The cargo space is usually covered with a canvas.

CHARACTERISTICS

Weight.....	7.5 tons
Length.....	31 feet
Height.....	8 feet 10 inches
Width.....	8 feet
Engine.....	6-cylinder ZIS
Horsepower.....	110
Speed: Land.....	50 miles per hour
Water.....	6.5 miles per hour
Payload cargo.....	2.5 tons
Passengers.....	20-30



TRACKED AMPHIBIAN K-61

TRACKED AMPHIBIAN K-61

This vehicle has seven road wheels and seven return rollers. The suspension system is torsion bar. The front is very blunt. The driver's compartment is located far forward. It has a two section windshield with two headlights located at each side and a spotlight in the center. This vehicle has a very large cargo space with a large tail gate which can be lowered and used as a loading ramp. There are two exhaust pipes which extend upward from the deck just to the rear of the driver's compartment on the left side of the vehicle. This vehicle has two large three bladed screws mounted in the rear of the vehicle for water propulsion.

CHARACTERISTICS

Weight.....	6 tons
Length.....	30 feet
Height.....	7 feet
Width.....	12 feet
Length of bed.....	13 feet
Speed: Land.....	25 miles per hour
Water.....	11.5 miles per hour
Payload cargo.....	5 to 7 tons
Passengers.....	25



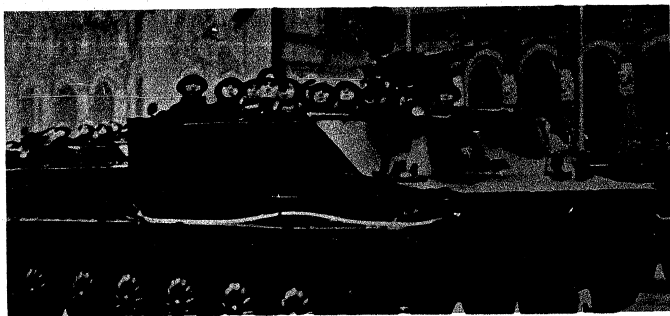
AMPHIBIOUS TANK

AMPHIBIOUS TANK

The outward appearance of this vehicle is typical of most amphibious vehicles having the usual pointed bow and stern. The hull is a little higher in the rear than in the front. On the left side of the deck, just rearward of the turret, are two large grills. The driver's hatch is located in the center of the front deck just forward of the turret. The suspension system is christie type with six roadwheels and the drive sprocket located in the rear. The turret is round, dome shaped, with a large oval hatch in the center.

CHARACTERISTICS

Vehicle	Armament
Weight.....15.4 tons	Primary armament.....76-mm gun
Length.....22 feet 6 inches	No. rounds carried.....40 rounds
Height.....7 feet	Secondary armament.....7.62-mm MG
Width.....10 feet 6 inches	
Track width.....12 inches	
Number of crew.....3	
Type of suspension.....Christie	
No. of road wheels.....6	
Engine.....Diesel	
Speed: Land.....25 miles per hour	
Water.....6 miles per hour	
Cruising range.....175 miles	



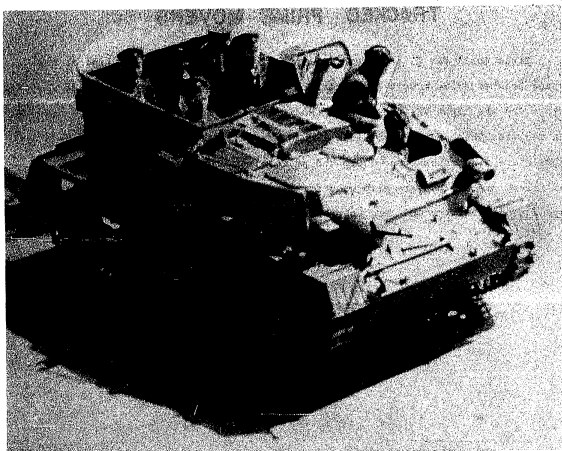
AMPHIBIOUS ARMORED PERSONNEL CARRIER

AMPHIBIOUS ARMORED PERSONNEL CARRIER

Until recently the Soviet only used wheeled non-amphibious armored personnel carriers, such as the BTR-40 and the BTR-152. In 1957 they introduced a tracked amphibious armored personnel carrier, based on the proven chassis of the light Amphibious Tank. This open-topped vehicle with a crew of three men, carried 12 men in the troop compartment. The normal armament is a 12.7mm machine gun, however provision is made to mount other weapons such as recoilless guns. Teamed with the light Amphibious Tank this new APC gives the Soviets an excellent armored reconnaissance potentiality.

TRACKED PRIME MOVERS

Since World War II the Soviets have introduced a complete new line of high-speed tracked prime movers (or "Artillery Tractors"). At present the most up-to-date types are the light Ya-14 and Ya-14 (Modified), the medium M1954, and the heavy M1950. In addition there is a specialized light armored tracked prime mover. Some older models are also encountered. Tracked prime movers not only tow all sorts of artillery pieces, but are also used for many purposes where great towing power, high speed road mobility, and cargo capacity are needed.



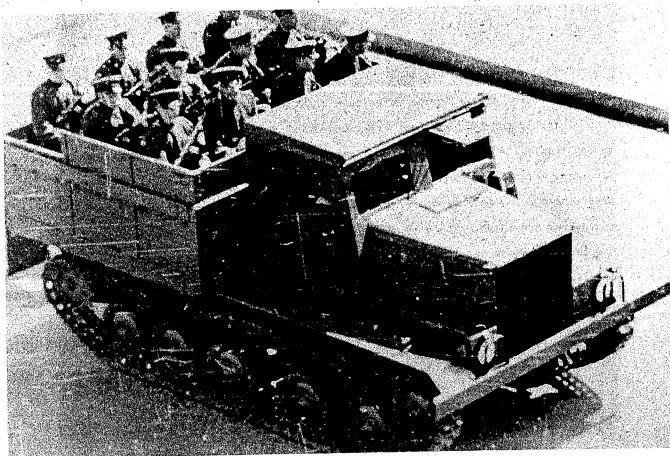
ARMORED TRACKED PRIME MOVER

240.1

ARMORED TRACKED PRIME MOVER

The armored tracked prime mover is a lightly armored vehicle. It has a crew of three, consisting of driver, gunner, and commander. The crew compartment is enclosed. The vehicle can carry 6 passengers in an open rear compartment. A 7.62-mm light machine gun mounted on a ball mount is its only armament. It has five road wheels, four of them are smaller than the rear wheel which acts as a road wheel and idler. There is a large space between the fourth and fifth road wheels. There are two return rollers. The basic chassis of this vehicle is the same as the chassis of the 45-mm and 57-mm self-propelled antitank guns. This vehicle is used as a prime mover for medium artillery.

240.2



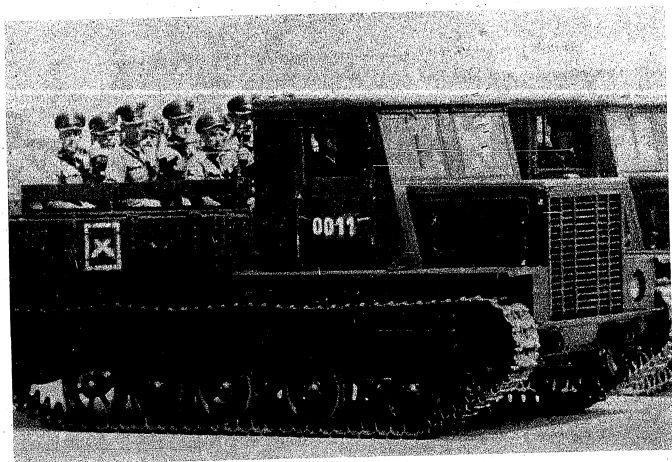
TRACKED PRIME MOVER M-2

TRACKED PRIME MOVER M-2

The M-2 is classified as a light prime mover. This vehicle has torsion bar suspension with five road wheels and three support rollers on each side. The largest distance is between the second and third road wheels. The drive sprocket is in the rear. The vehicle has a very small wooden bed for carrying cargo. The rear of the cargo space has a double door for entrance. The cab on the M-2 is a rather small box looking affair with a very flat roof, and has two doors, one on each side. There are two sections to the windshield. The radiator grill is rather large and square with horizontal channeling. The vehicle is used to tow heavy mortars and medium artillery howitzers.

CHARACTERISTICS

Weight.....	10 tons
Length.....	16 feet
Height.....	7 feet 2 inches
Width.....	7 feet 9 inches
Length of bed.....	9 feet
Draw bar capacity.....	5 tons
Payload.....	1.5 tons
Engine.....	YaAZ 204B Diesel
Passengers.....	12



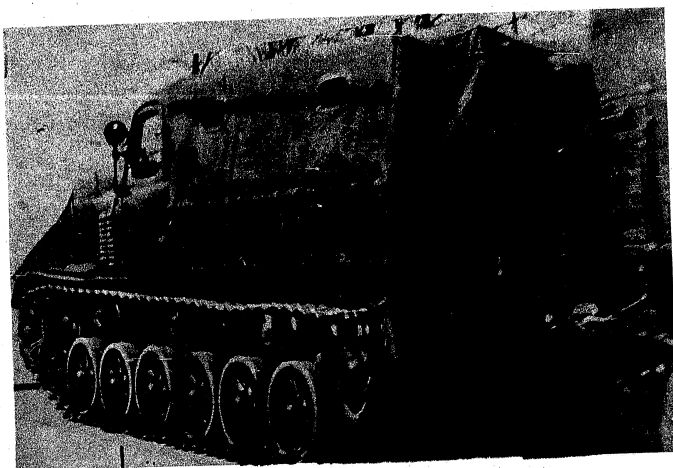
TRACKED PRIME MOVER YA-12 AND YA-13

TRACKED PRIME MOVERS, YA-12 AND YA-13

These two vehicles are identical in their outer appearance. Both are full tracked, each having five road wheels and three support rollers. The greatest spacing between the road wheels is between the first and second road wheels. Both have torsion bar suspension. The hood on these prime movers is rather short and square. The cab is box shaped with one door on each side and a two section windshield. The bed is rather small with very low sides and is covered with a removable canvas cover. The only difference in these two vehicles is the engine. The YA-12 has a diesel engine and the YA-13 has a gasoline engine.

CHARACTERISTICS

	YA-12	YA-13
Weight.....	16,700 pounds	16,940 pounds
Draw bar capacity.....	17,600 pounds	11,000 pounds
Length.....	16 feet	16 feet
Height.....	7 feet 3 inches	7 feet 3 inches
Width.....	7 feet 10 inches	7 feet 10 inches
Length of bed.....	9 feet	9 feet
Number of road wheels.....	5	5
Engine.....	Diesel	Gasoline
Horsepower.....	110	95
Payload cargo.....	3.5 tons	2.2 tons
Passengers.....	12	12
Width of truck.....	11.8 inches	11.8 inches
Speed: hard surfaced.....	23 miles per hour	15 miles per hour
cross country.....	10 miles per hour	5 miles per hour



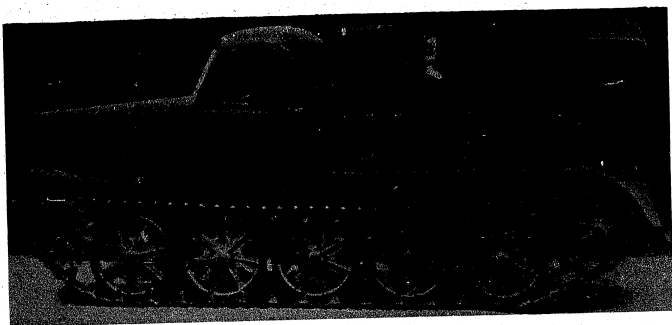
TRACKED PRIME MOVER YA-14

TRACKED PRIME MOVER YA-14

This is a light prime mover. It is a full tracked vehicle having six road wheels and three return rollers. The drive sprocket is located in the front. The top of the track has a very definite slope from front to rear. The cab resembles a truck cab. It has a three section windshield, one large section on each side with a very narrow section in the center. The hood has two rows of ventilating slots on each side. The cargo space is very small and has two access doors in the rear. The YA-14 is used to tow light and medium antiaircraft artillery.

CHARACTERISTICS

Weight.....	9 tons
Length.....	16 feet
Width.....	96 inches
Length of bed.....	90 inches
Height.....	90 inches
Number of road wheels.....	6
Type of suspension.....	Torsion bar
Width of track.....	11.8 inches
Payload cargo.....	3 tons
Passengers.....	12



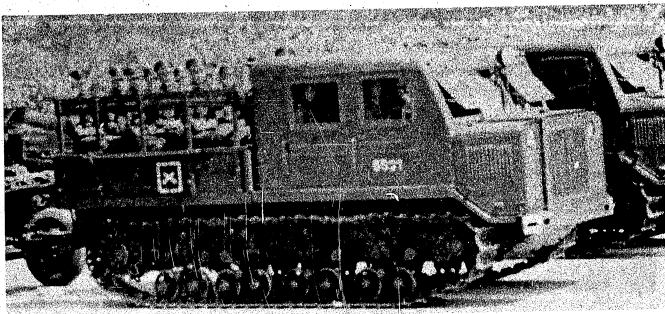
TRACKED PRIME MOVER YA-14 (MODIFIED)

246.1

TRACKED PRIME MOVER YA-14 (MODIFIED)

This vehicle is a modified version of the YA-14. The YA-14 (Modified) has a different suspension system. It has five large Christie type road wheels with no return rollers. The basic dimensions appear to be identical to those of the YA-14.

246.2



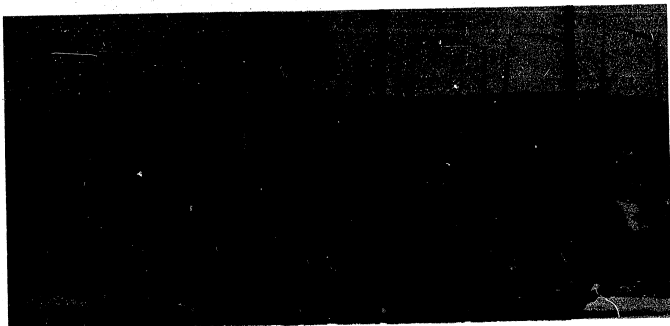
TRACKED PRIME MOVER M-1954

TRACKED PRIME MOVER M1954

This vehicle is classified as a heavy prime mover. When viewed from the front it has a box-like appearance. The hood is very short and has a very large cab, with two seats extending the width of the cab. It has two doors on each side and a three section windshield. The cargo space is rather small for such a large vehicle. The suspension system is rather peculiar, having eight road wheels with four support rollers. It is believed to be torsion bar with an arm attached to the end of crank which mounts two small road wheels in tandem. The drive sprocket is located in the rear of the vehicle. This vehicle is used for towing medium artillery.

CHARACTERISTICS

Weight.....	10-12 tons
Length.....	19 feet
Height.....	10 feet
Width.....	9 feet
Length of bed.....	10 feet
Draw bar capacity.....	15 tons
Payload.....	4000 pounds
Engine.....	Diesel (?)
Passengers.....	20 persons



TRACKED PRIME MOVER M-1950

TRACKED PRIME MOVER M-1950

This is the largest of the prime movers used by the Soviets. This prime mover is a truck type body mounted on a T34 tank chassis. It has five road wheels. The largest space between the road wheels being between the second and third road wheels. This vehicle has Christie type suspension. The drive sprocket is located in the front of the vehicle. The prime mover has a very wide cab with a three section windshield. It has a winch located underneath the body with the cable extending to the rear. This prime mover has a very large cargo space. The M-1950 is used to tow medium and heavy AA and artillery pieces.

CHARACTERISTICS

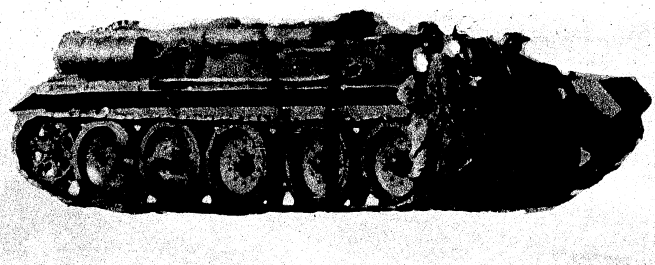
Weight.....	15 tons
Length.....	20 feet
Height.....	8 feet 8 inches
Width.....	9 feet 4 inches
Length of bed.....	11 feet 6 inches
Draw bar capacity.....	30-35 tons
Payload.....	5-7 tons
Engine.....	Diesel V-12
Passengers.....	25-30 persons

SPECIAL PURPOSE ARMORED TRACKED VEHICLES

The Soviet Army is converting some of its obsolete combat armored tracked vehicles to special purpose types. These converted vehicles are used as recovery, observation, or command vehicles and may also be used as armored, tracked prime movers.

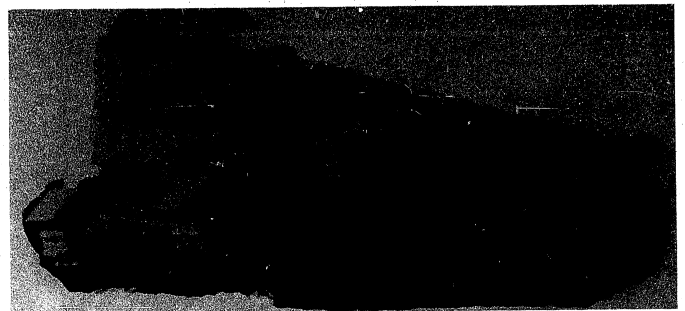
The changes that are accomplished are quite simple. Turrets are removed from tanks while the main armament is taken off the assault guns.

On the following pages are some of the converted special purpose vehicles.



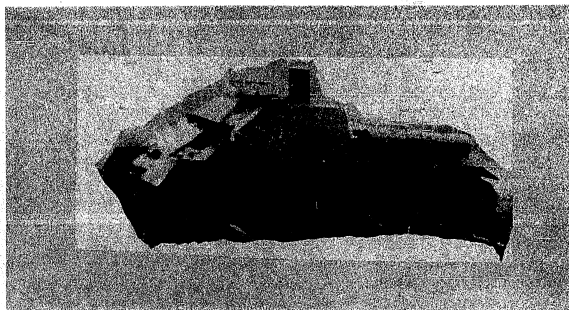
T-34 CHASSIS

251.2



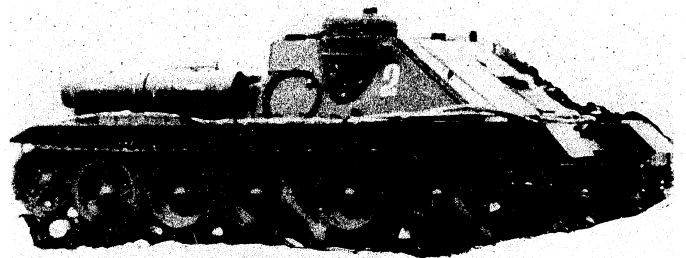
T-34 RECOVERY VEHICLE WITH BOOM

251.3



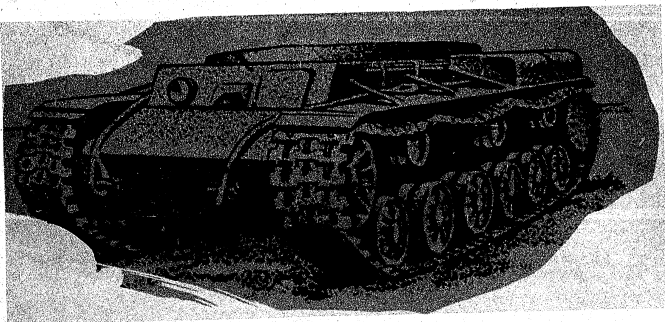
SU-85 CHASSIS

251.4



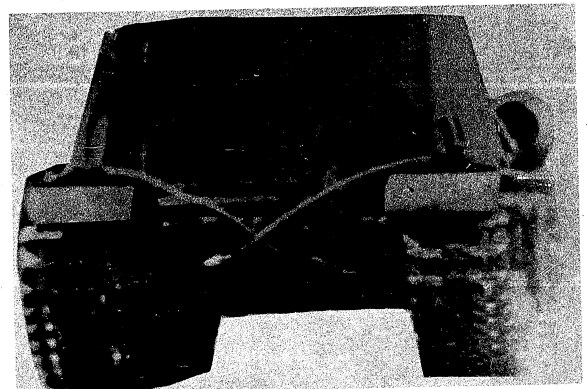
SU-100 CHASSIS

251.5



JS CHASSIS

251.6



JSU CHASSIS

251.7

SECTION II

EUROPEAN SATELLITES

CZECHOSLOVAKIA

The Czechs are equipped with more native design weapons than any other satellite. Although Soviet designed weapons are extensively found in the Czech Army, there are many types of weapons and equipment which are products of Czech technical ability. Many of these items are used in other satellite armies, and some of them have been exported to the Middle East.

In addition to the new Czech small arms, some of the older models have been shown in this handbook. They fire the German World War II 7.92mm ammunition. These weapons were used before the new models were introduced. They are still available in quantity.

**7.65 MM PISTOL M1950**

S 4

7.65-mm PISTOL M1950

The design of this Czech double action pistol is similar to the German Walther PP and PPK pistols. The M1950 pistol is light weight and has excellent balance. It makes a very popular side arm despite its small caliber and limited stopping power. Some of the recognition features are the exposed hammer with a rounded spur, a cartridge indicator which protrudes from the left side of the slide. On this weapon the safety lever is located on the upper left side of the receiver, while on the Walther the safety is on the slide.

CHARACTERISTICS

Caliber.....	7.65-mm
Ammunition.....	7.65-mm ball
System of operation.....	Blowback double action
Feeding device.....	8 round magazine
Muzzle velocity.....	915 feet per second
Effective range.....	55 yards
Overall length.....	6.33 inches
Barrel length.....	3.75 inches
Sights: Front.....	Fixed blade
Rear.....	Open notch
Weight: w/o magazine.....	1.48 pounds
w/magazine.....	1.62 pounds

S 5

**7.62 MM AUTOMATIC PISTOL M52****7.62-mm AUTOMATIC PISTOL M52**

The pistol M52 resembles in many ways the features of the 7.62-mm pistol M50, with the exception of the locking device. This is a roller and wedge type locking device.

This system works by two rollers positioned in the grooves located on either side of the slide. When the slide recoils a wedge, which is permanently affixed to the barrel, causes the rollers to cam from the locked to the unlocked position. The weapon has a disassembly catch located on the trigger guard and slide catch located on the left side of the receiver. The plastic pistol grips have a U-shaped retaining clip which holds them to the frame.

CHARACTERISTICS

Caliber.....	7.62-mm
Ammunition.....	7.62-mm pistol (Czech & Soviet)
System of operation.....	Recoil
Feeding device.....	8 round magazine
Muzzle velocity.....	1300 feet per second
Effective range.....	25 yards
Overall length.....	8.25 inches
Barrel length.....	4.71 inches
Sights: Front.....	Blade
Rear.....	U notch
Weight: w/o magazine.....	1 pound 15 ounces
w/magazine.....	2 pounds 5 ounces



7.92 MM RIFLE M1924

7.92-mm RIFLE M1924

This weapon was the standard shoulder weapon of the Czech Army prior to the German occupation and was manufactured for the Germans during World War II. It employs the standard Mauser action. Some of the recognition features of the M24 rifle are: four sling swivels, two located under the stock and two located on the side of the stock; the finger grooves along the side of the stock for better finger grip; and a metal hole to aid in disassembly.

CHARACTERISTICS

Caliber.....	7.92-mm
Ammunition.....	7.92-mm Mauser ball
System of operation.....	Bolt
Feeding device.....	5 round clip
Effective rate of fire.....	5 to 10 rounds per minute
Muzzle velocity.....	2477 feet per second
Effective range.....	440 yards
Overall length.....	43.3 inches
Barrel length.....	29.3 inches
Sights: Front.....	Blade
Rear.....	Tangent leaf V notch
Weight: Unloaded.....	8.6 pounds
Loaded.....	9.2 pounds



7.62 MM SEMI-AUTOMATIC RIFLE M1952

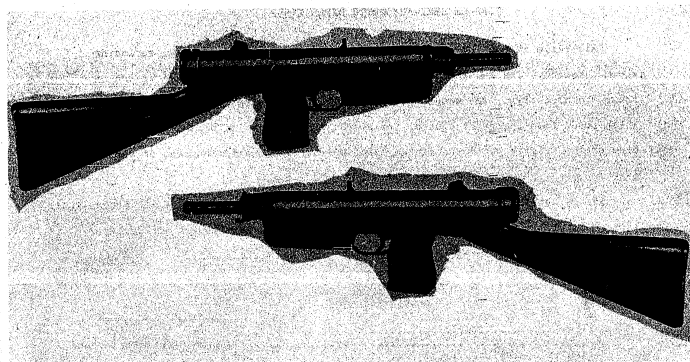
7.62-mm SEMI-AUTOMATIC RIFLE M1952

This rifle is now the standard shoulder weapon of the Czech Army, replacing the M24 Mauser. The M52 is a semi-automatic, gas operated, air cooled weapon of conventional design. The weapon is equipped with a folding knife type bayonet, which folds into the right side of the stock. The safety is located on the left side of the trigger guard and the magazine release is located in front of the trigger guard.

The gas operation of the M52 rifle is somewhat similar to that of the German G-41, in that it utilizes a gas cylinder completely encircling the barrel. The trigger assembly is identical in operation to that of the US M1 rifle cal..30.

CHARACTERISTICS

Caliber.....	7.62-mm
Ammunition.....	7.62-mm Czech short round
System of operation.....	Gas
Feeding device.....	10 round box magazine
Effective rate of fire.....	10 to 20 rounds per minute
Muzzle velocity.....	2442 feet per second
Effective range.....	650 yards
Overall length.....	39.37 inches
Barrel length.....	20.60 inches
Sights: Front.....	Hooded blade
Rear.....	Open tangent
Weight: w/magazine.....	9.4 pounds
w/o magazine.....	8.6 pounds



7.62 MM SUBMACHINE GUN M24

S 12

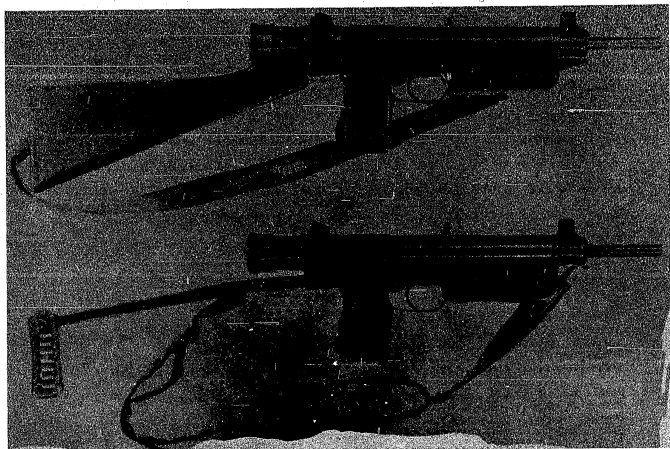
7.62mm SUBMACHINE GUN M24 & M26

This weapon is a modified version of the 9-mm M23 Czech submachine gun. The M24 is chambered for the Soviet and Czech 7.62-mm pistol cartridge. Some of the modifications incorporated in the M24 are a bolt that is three ounces heavier than the 9-mm bolt and a new magazine to take the longer 7.62-mm cartridge. This is a weapon of simple and rugged construction, utilizing many stamped parts. Some other features of the weapon are the separate stock and rear sight bracket which are spot welded to the receiver jacket. The pronounced forward pitch of the magazine when inserted in the weapon and the molded plastic hand rest and pistol grip are other recognition features of this machine gun. A folding stock version the M26 also exists.

CHARACTERISTICS

Caliber.....	7.62-mm
Ammunition.....	7.62-mm Pistol ball cartridge
System of operation.....	Blowback
Feeding device.....	32 round box magazine
Effective rate of fire.....	60-80 rpm semi-automatic; 90-120 rpm automatic
Muzzle velocity.....	1640 feet per second
Effective range.....	220 yards
Overall length.....	27 inches
Barrel length.....	11.2 inches
Sights: Front.....	Hooded blade
Rear.....	Rotary square notch
Weight: w/o magazine.....	7.5 pounds
w/magazine.....	8.4 pounds

S 13



9 MM SUBMACHINE GUN M23 AND M25

S 14

9-mm SUBMACHINE GUN M23 AND M25

The 9-mm submachine guns are a Czech post-war development and are standard in the Czechoslovakian Army. There are two models of this weapon, the M23 with a wooden stock and the M25 with a folding metal stock. With the exception of this, the weapons are identical in construction and operation. They can be fired either semi or full automatic. An unusual feature of these machine guns is that the bolt is hollow and overrides the barrel. This permits the use of a longer barrel for better ballistic performance and greater velocity without increasing the length of the piece.

CHARACTERISTICS

Caliber.....	9-mm
Ammunition.....	9-mm Parabellum
System of operation.....	Blowback
Feeding device.....	20 or 40 round box magazine
Effective rate of fire.....	60-80 rpm semi-automatic; 90-120 rpm automatic
Muzzle velocity.....	1225 feet per second
Effective range.....	220 yards
Sights.....	Front Hooded inverted V; Rear Rotary V notch
Barrel length.....	11.2 inches

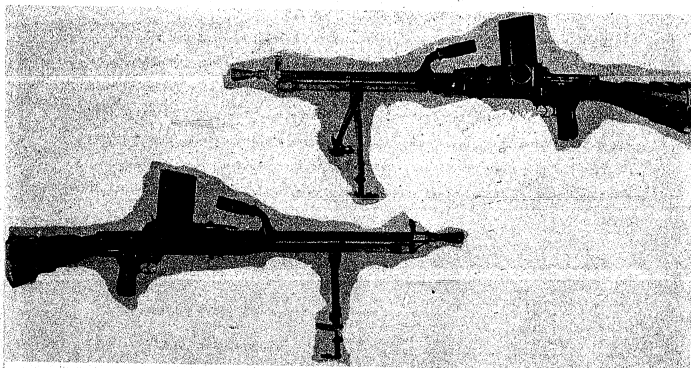
M23

Overall length.....	27 inches
Weight: w/o magazine.....	7.1 pounds
w/24 round mag.....	8.2 pounds
w/40 round mag.....	8.4 pounds

M25

27 inches extended;
17.5 inches w/stock folded
7.7 pounds
8.8 pounds
9.0 pounds

S 15



7.92 MM LIGHT MACHINE GUN MODEL ZB30

7.92-mm LIGHT MACHINE GUN MODEL ZB30

The ZB30 light machine gun is an improved version of the ZB26 machine gun. It has added features of a fitting for a butt monopod support and a light folding tripod for use as an antiaircraft mount. The ZB30 can be fired either semi or full automatic. This weapon was manufactured by Czechoslovakia for export to other nations. Some of the features are the multi-ferruled barrel, the slightly enlarged head of the gas piston housing, and the sliding feed opening cover and the magazine on top of the receiver.

CHARACTERISTICS

Caliber.....	7.92-mm
Ammunition.....	7.92-mm rimless rifle (Czech or German)
System of operation.....	Gas
Feeding device.....	20 round box magazine
Effective rate of fire.....	180 rounds per minute
Muzzle velocity.....	2700 feet per second
Effective range.....	875 yards
Overall length.....	45.8 inches
Sights: Front.....	Blade
Rear.....	Drum aperture
Weight: w/o magazine.....	20 pounds
w/magazine.....	21.7 pounds



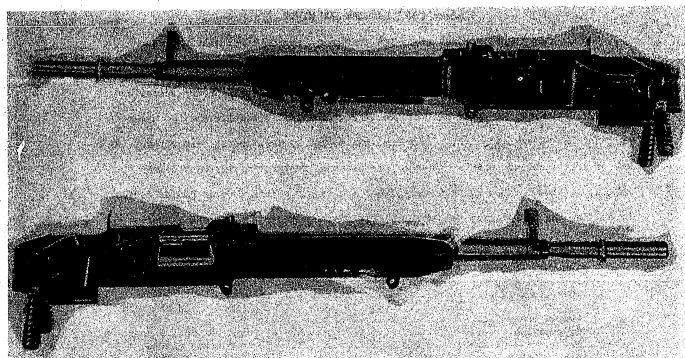
7.62 MM LIGHT MACHINE GUN M1952

7.62-mm LIGHT MACHINE GUN M1952

This weapon is an improvement to the previous types of light machine guns employed by the Czech Army. It should be noted that this weapon employs some of the features found on the German MG34, namely the use of the trigger for selecting the type of fire. The lower half of the trigger for full automatic and the upper half for semi-automatic fire. The weapon can be fed by magazine or belt without the use of additional components. Most of the external features of the weapon are similar to those of the British Bren light machine gun. This machine gun is cocked by pulling the pistol grip to the rear. The weapon employs a quick change barrel. The sights are located on the left side.

CHARACTERISTICS

Caliber.....	7.62-mm
Ammunition.....	Czech 7.62-mm short round
System of operation.....	Gas
Feeding device.....	25 round box or 100 round belt
Effective rate of fire.....	250 rounds per minute
Muzzle velocity.....	2500 feet per second
Effective range.....	880 yards
Overall length.....	41 inches
Barrel length.....	21.3 inches
Sights: Front.....	Hooded blade
Rear.....	U notch
Weight: w/o box magazine.....	17.9 pounds
w/box magazine.....	19.6 pounds



7.92 MM HEAVY MACHINE GUN MODEL ZB37

S 20

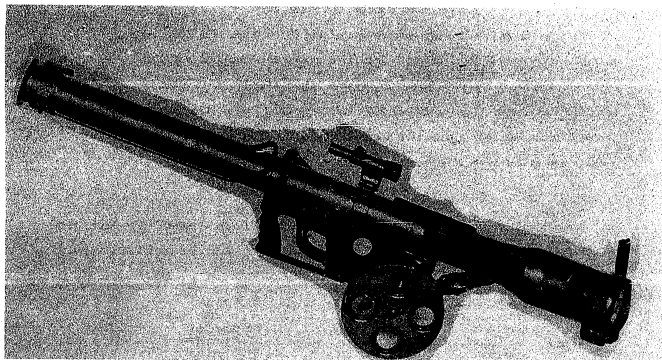
7.92-mm HEAVY MACHINE GUN MODEL ZB37

This is the standard heavy machine gun of the Czech Army. The ZB37 has a selective fire switch located on the left side of the receiver. It can fire either slow or fast rates of fire. The weapon is fed from the right side by metallic link belts of either 100 or 200 round lengths. Some of the features are the high front and rear sights, and the retractable cocking handles. Barrel jackets are either rectangular shaped or finned.

CHARACTERISTICS

Caliber.....	7.92-mm
Ammunition.....	7.92-mm Standard (German or Czech)
System of operation.....	Gas
Feeding device.....	100-200 round metallic link belt
Effective rate of fire.....	550 rounds per minute
Muzzle velocity.....	2300 feet per second
Effective range.....	1200 yards
Overall length.....	43.5 inches
Sights: Front.....	Blade with guard
Rear.....	Folding leaf
Weight: w/o tripod.....	41.8 pounds
w/tripod.....	85.8 pounds

S 21



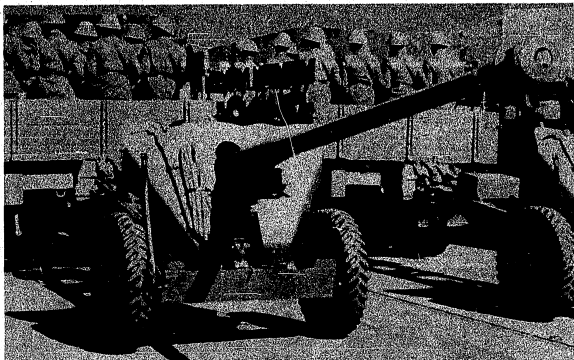
82 MM RECOILLESS GUN T-21 (TARASNICE)

82-mm RECOILLESS GUN T-21 (TARASNICE)

The Tarasnice is an electrically fired smooth bore weapo. designed for use as an easily transportable antitank weapon. The weapon can be fired from the ground by utilizing the wheeled mount as a bipod or it may be shoulder fired without detaching the mount. Some of the features other than those already mentioned are the method of case extraction, since the weapon has no mechanical features for ejecting spent cases. When the breech block is open the rear of the spent case falls to the bottom of the chamber and is then removed by the loader or by the firer elevating the weapon.

CHARACTERISTICS

Caliber.....	82-mm
Ammunition.....	HEAT
System of operation.....	Recoilless
Effective rate of fire.....	4 to 5 rounds per minute
Muzzle velocity.....	875 feet per second
Effective range.....	500 yards
Overall length.....	58 inches
Barrel length.....	47.25 inches
Sights: Front.....	Modded post
Rear.....	Open sight or 1.8 X Telescope
Weight: w/o mount.....	38 pounds
w/mount.....	44 pounds
Weight of complete round of ammunition (HEAT).....	49.5 pounds



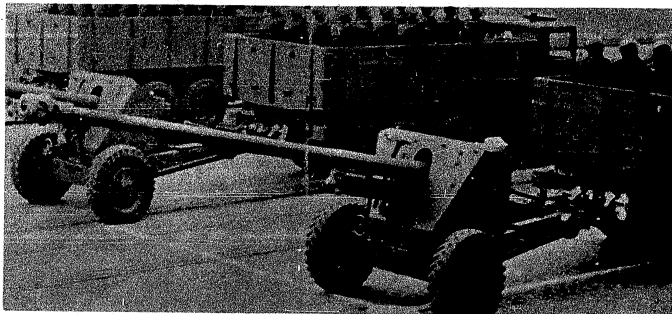
85 MM FIELD GUN M1952

S 24

85-mm FIELD GUN M1952

This weapon is one of the standard field artillery pieces of the Czech and East German armies. Some of the features of this weapon are the tapered barrel, the boxed-split trails and the recoil mechanism, located under the tube, and protruding from the front of the curved shield. The weapon has a double baffle muzzle brake, same as that used by the German Army during World War II. On the trails is a box probably used to carry the sight mechanism and spare parts. This gun fires Soviet 85-mm ammunition.

S 25



100 MM FIELD GUN M1953

S 26

100-mm FIELD GUN M1953

This Czech weapon is very similar in appearance to the smaller Czech 85-mm Field Gun M1952. It may at times also be confused with the Soviet 100-mm Field Gun 1944 (BS-3). However it should be noted that the Soviet weapon has dual wheels, whereas the Czech gun has single. The later Soviet 100-mm Field Gun M1955 is entirely different in appearance.

The Czech 100-mm Field Gun M1953 fires the same ammunition as the Soviet models.

S 27



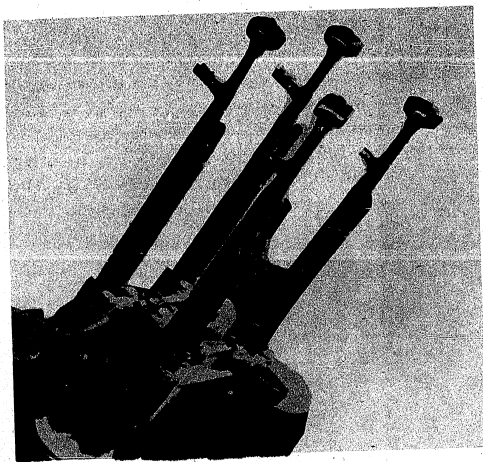
152 MM HOWITZER M18/46

S 28

152-mm HOWITZER M18/46

This howitzer is one of the heavier artillery pieces of the Czech army. It is basically the German 150-mm Field Howitzer M18 rebored to take Soviet 152-mm ammunition. A further modification was the addition of a double baffle muzzle brake. Some of the recognition features are the jacket and tube construction, recoil mechanism on the top of the tube, box split trails. The wheels of the weapon can either be of solid rubber or metal. The weapon also has a two wheel dolly, which is removed when the weapon is set up in firing position.

S 29



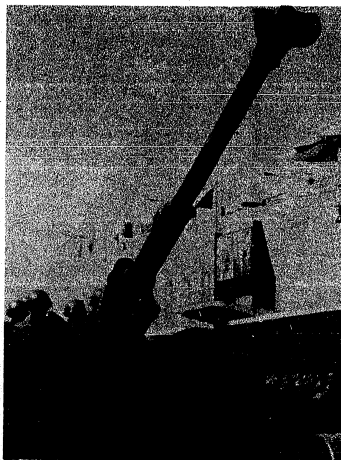
12.7 MM QUAD MOUNTED ANTIAIRCRAFT HEAVY MACHINE GUN

S 30

12.7-mm QUAD MOUNTED ANTIAIRCRAFT HEAVY MACHINE GUN

This quad mounted machine gun used by the Czechoslovakian Army mounts four Soviet 12.7-mm DShK heavy machine guns. The DShK's have been modified so that they can be drum fed. The tripod has fixed legs and the wheels are removed or raised for firing. Some of the recognition features are the four drums located on either side of the weapons and the prominent sight mechanism.

S 31



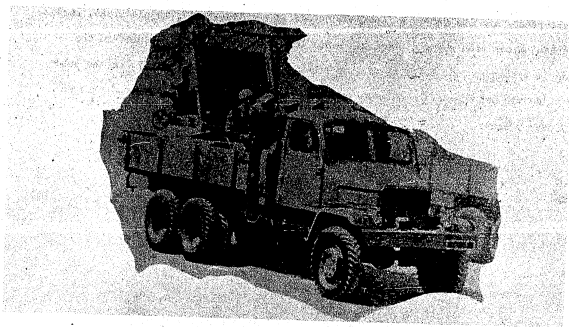
85 MM ANTI-AIRCRAFT GUN

S 32

85-mm ANTI-AIRCRAFT GUN

This Czech weapon is a modification of the Soviet 85-mm AA Gun. Some of the differences are the use of a T-shaped instead of a multi-baffle muzzle brake, recoil mechanism has been changed, the cradle has been cut out between the tube and the recoil system so that there is a clear space between the two. Further, on the tube a guide rib has been attached. The overall length of the weapon has been increased by over 3 feet.

S 33



130 MM (32-TUBE) ROCKET LAUNCHER RM-130

S 34

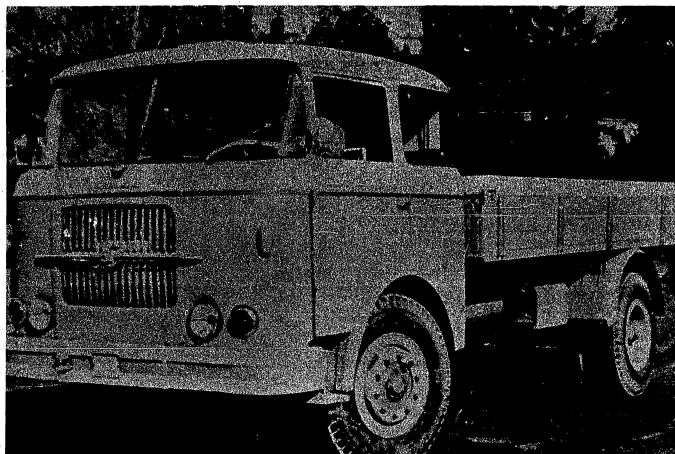
130-mm (32-TUBE) ROCKET LAUNCHER RM130

The 130-mm is mounted on the 5-ton, 6X6 Praga V3S. The launcher consists of 4 banks with 8 tubes each. The traversing and elevating hand wheels are located on the right and left side of the launcher. The weapon can be fired selectively, i.e., single, group, or salvo. The elevating arms, located on either side of the launcher, contain the coil springs which are the equilibrators. Each tube contains four guide rails.

CHARACTERISTICS

Caliber.....	.....
No. of rounds.....	.....
Stabilisation.....	.....
Total traverse.....	.....
Length of tubes.....	.....
Fire control device.....	.....
Mount.....	.....

S 35



TRUCK CARGO 4 X 2 SKODA 706R

S 36

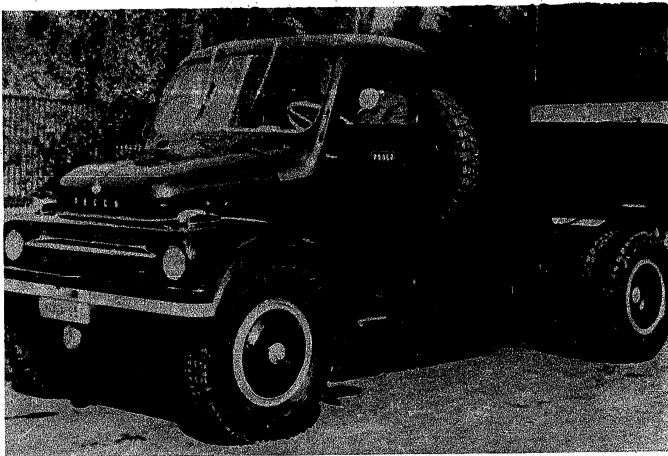
TRUCK, CARGO, 4X2 SKODA 706R

The Skoda 706R is a seven ton cargo truck powered by a six cylinder, in-line, overhead-valve, liquid cooled Diesel engine. This vehicle is two wheel drive (rear). The cab is wide enough to seat 3 people comfortably. The body on this truck is made of wood. The grill runs both horizontally and vertically. This is the same basic vehicle as the Skoda 706RS. The difference is that the RS has a steel dump box. This vehicle is believed to be standard equipment. (May also be used as a light artillery prime mover)

CHARACTERISTICS

Weight (Net).....	14,241 pounds
Wheelbase.....	196 inches
Length, overall.....	27 feet 2 inches
Height.....	8 feet 2 inches
Width.....	7 feet 10 inches
Horsepower.....	145HP @ 1800 rpm
Type fuel.....	Diesel
Fuel capacity.....	33 gallons
Maximum speed.....	34 miles per hour
Maximum payload.....	8 tons

S 37



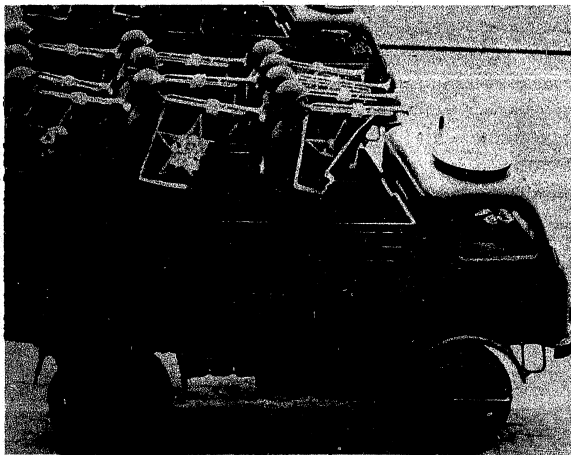
TRUCK, CARGO, 4 X 2 PRAGA S5T

S 38

TRUCK, CARGO 4X2 PRAGA S5T

The Praga S5T is a 4X2 five ton cargo and personnel carrier. This vehicle has an all metal cab. The front of the vehicle is rather blunt. The spare tire is mounted to the rear of the cab. This vehicle has a rather small wooden box.

S 39



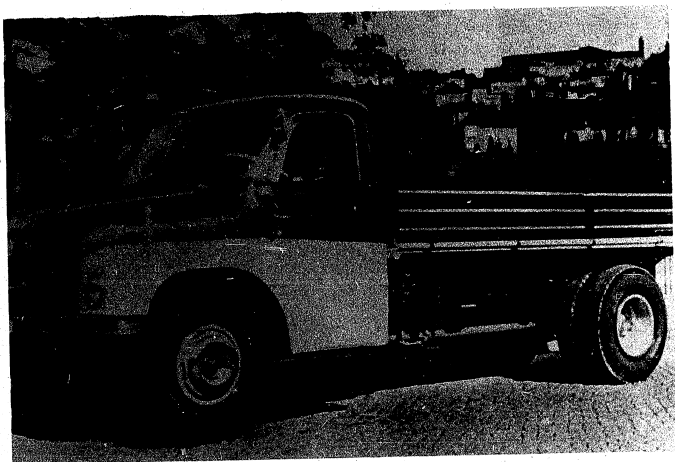
TRUCK CARGO 4 X 4 TATRA 805

TRUCK, CARGO, 4X4 TATRA 805

The Tatra 805 is a 4X4, cab over engine, one and one half ton, cargo and personnel carrier. The cab is all steel with a machine gun ring mount located on the right top. The cab sets well forward of the front wheels. The box is made of wood. This vehicle is also found with van or enclosed type boxes. The Tatra 805 is powered by an air-cooled, overhead valve 8-cylinder V-type engine.

CHARACTERISTICS

Weight (Net).....	5500 pounds
Wheelbase.....	8 feet 10 inches
Length overall.....	15 feet 6 inches
Height overall.....	8 feet 7.5 inches
Width.....	6 feet 8.5 inches
Horsepower.....	75HP @ 4200 rpm
Type fuel.....	Gasoline
Maximum speed.....	47 miles per hour
Maximum payload.....	3000 pounds



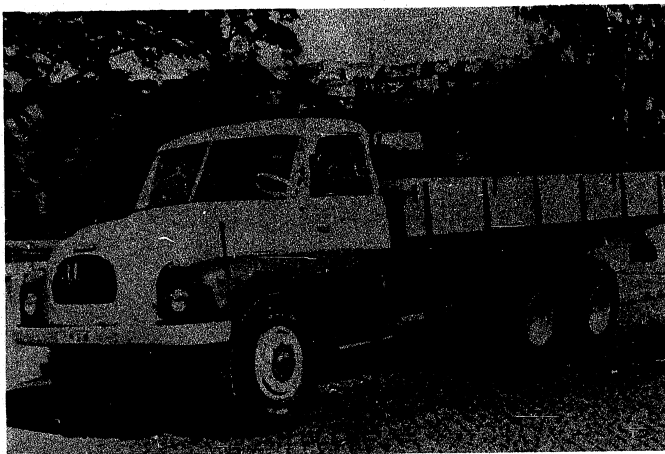
TRUCK, CARGO, 4 X 4 TATRA 137

TRUCK, CARGO, 4X4 TATRA 137

The Tatra 137 is a 4X4 cargo and personnel carrier. This vehicle has an all metal cab. The gear shifting levers have been mounted on the steering column, thus allowing enough room in the cab to set 4 people. The hood and front of the vehicle are rather rounded. The box is made of wood. This vehicle has a five speed transmission and a two-speed transfer case. The power plant is a V-8 cylinder, air-cooled Diesel.

CHARACTERISTICS

Weight.....	11,400 pounds
Wheel base.....	179 inches
Length (Overall).....	24 feet
Height (Overall).....	8 feet
Width.....	8 feet 2 inches
Horsepower.....	160HP @ 2000 rpm
Type fuel.....	Diesel
Maximum speed.....	45 miles per hour
Payload.....	7 tons



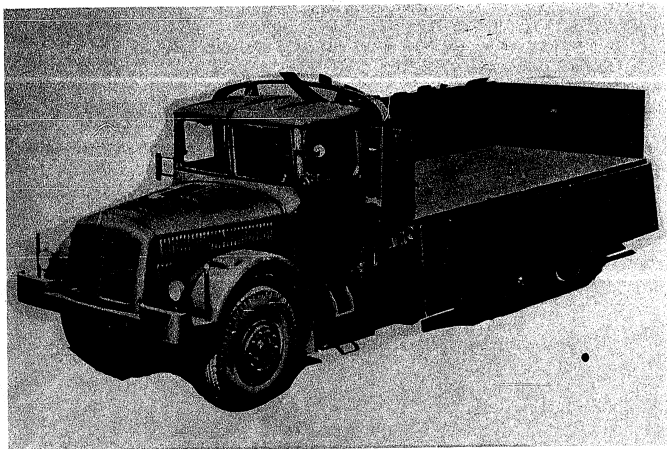
TRUCK, CARGO, TATRA 138

S 44

TRUCK, CARGO, 6 X 6, TATRA 138

The Tatra 138 is a new 12-ton vehicle designed to replace the Tatra 111. The 138 has an all metal cab and a wooden box. It has tandem rear axles and a 12-cylinder V-type Diesel engine.

S 45



TRUCK, CARGO, 6 X 6 TATRA 111

S 46

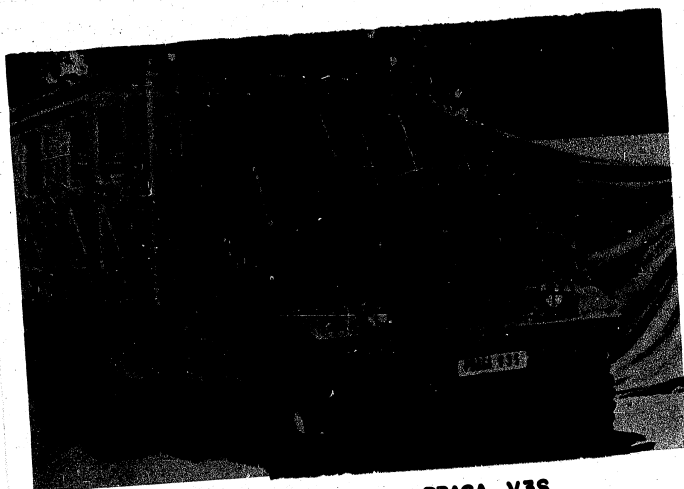
TRUCK, CARGO 6X6 TATRA 111

The Tatra 111 is a 6X6 heavy type cargo vehicle. This vehicle has an all metal cab. The hood has large ventilating areas in the front, both sides and on top. The motor is a 12-cylinder, air-cooled Diesel. It has a very large wooden cargo space. This vehicle has a four speed transmission and a two speed auxiliary transmission. This vehicle is being replaced in the Czechoslovakian Army with the Tatra 138.

CHARACTERISTICS

Weight.....	16,000 pounds
Wheel base.....	164 in. front tandem; 212 in. rear tandem
Length.....	27 feet 3 inches
Height.....	8 feet 9 inches
Width.....	8 feet 2 inches
Horsepower.....	180HP
Type fuel.....	Diesel
Fuel capacity.....	30 gallons
Maximum speed.....	37 miles per hour
Payload.....	10 ton

S 47



TRUCK CARGO 6 X 6 PRAGA V3S

S 48

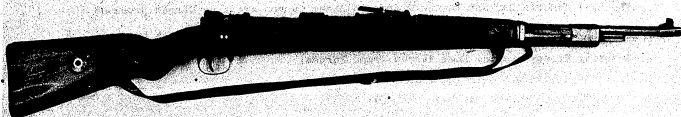
TRUCK, CARGO 6X6, PRAGA V3S

The Praga V3S, 6X6 cargo and personnel carrier is a heavy duty vehicle. This vehicle looks similar to the American 2½-ton GMC. The V3S is equipped with an all steel cab with the machine gun ring mount located on the top right side. This vehicle will be found with a wooden box, a van type box, and as an oil tanker. There is a power winch located on the front of this vehicle. It has a 6-cylinder air-cooled, 100HP diesel engine. The V3S has 10,000 pounds payload capacity and 14,000 pounds drawbar capability.

S 49

EAST GERMANY

Like most satellites East Germany is largely armed with Soviet weapons. Nevertheless, there are many items which may be encountered which are German made. The MP 44 submachine gun, and the K98k rifle and MG34 light machine guns are all German World War II weapons. They are still found in quantity in East Germany as the weapons of the Workers Militia and the Garrisoned Security Troops. The Sk-1 Armored Car and the Sk-2 Armored Water Cannon are also German produced weapons used by the Security Troops. German made trucks are used both by the Security Troops and the East German Armed Forces.

**7.92 MM CARBINE K98K**

S 52

7.92-mm CARBINE K98K

This bolt operated Mauser rifle was the standard shoulder weapon of the German Army during World War II. It is now used in East Germany in the Workers Militia, Police, and certain units of the Garrisoned Security Troops. The K98k is similar in appearance to the United States M1903 Springfield. It is very much like the Czech M1924 which fires the same ammunition. This weapon is fitted with a short knife-type bayonet.

CHARACTERISTICS

Caliber.....	7.92-mm
Ammunition.....	7.92-mm Standard
System of operation.....	Bolt
Feeding device.....	5-rd single column clip
Effective rate of fire.....	9-10 rounds per minute
Muzzle velocity.....	2477 feet per second
Effective range.....	440 yards
Overall length.....	43.5 inches
Barrel length.....	23.5 inches
Sights: Front.....	Pyramidal blade
Rear.....	Tangent leaf V notch
Weight.....	9.3 pounds unloaded
	9.5 pounds loaded

S 53



7.92 MM SUBMACHINE GUN MP44

S 54

7.92-mm SUBMACHINE GUN MP44

The German MP44 was originally introduced in 1942 to provide a new type of weapon intermediate between the standard submachine gun and the rifle. For this purpose the standard 7.92-mm cartridge was shortened. In its final version the weapon was known as the "Assault Rifle 44". Since the Soviets have adopted a similar ammunition and similar type weapon in the 7.62-mm Submachine Gun Kalashnikov (AK). Care must be taken in distinguishing the two weapons as they are very similar. The MP44 is still in use in East Germany in the Workers Militia, Police, and certain units of the Garrisoned Security Troops.

CHARACTERISTICS

Caliber.....	7.92-mm
Ammunition.....	7.92-mm short
System of operation.....	Gas
Feeding device.....	30 round curved magazine
Effective rate of fire.....	40-50 rpm semi-automatic
	100-120 rpm automatic
Muzzle velocity.....	2250 feet per second
Effective range.....	440 yards semi-automatic
	220 yards automatic
Overall length.....	36.7 inches
Barrel length.....	16.2 inches
Sights: Front.....	Hooded blade
Rear.....	Tangent leaf and peep
Weight: Unloaded.....	10 pounds
Loaded.....	11.5 pounds

S 55



7.92 MM LIGHT MACHINE GUN MODEL 34 (MG 34)

S 56

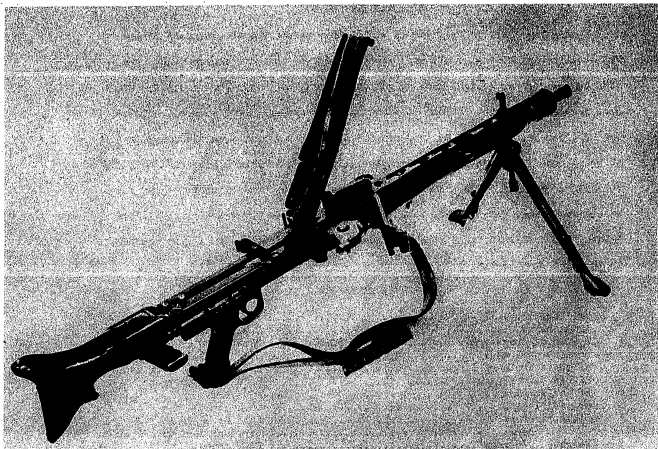
7.92-mm MACHINE GUN MG34

During the first years of World War II this weapon was the standard German rifle-caliber machine gun. It was later replaced by the more modern MG42. The MG34 can be used as a light machine gun on a bipod, or placed on a mount for use as a heavy machine gun. It can also be used on tanks and other armored vehicles. The MG34 can be fed either by a 50 round belt drum, a 75 round saddle drum, or a 50 round non-disintegrating link belt, usually linked to form a 250 round belt. The MG34 is equipped with a quick change barrel, and a double finger trigger for selective firing. The MG34 is still used in East Germany by the Workers Militia, Police, and certain units of the Garrisoned Security Troops. It is also mounted on the Sk-1 Armored Car.

CHARACTERISTICS

Caliber.....	7.92-mm
Ammunition.....	7.92-mm standard
System of operation.....	Short recoil
Feeding device.....	50 round belt drum
Effective rate of fire.....	100-120 rounds per minute
Muzzle velocity.....	2480 feet per second
Effective range.....	600 yards
Overall length.....	48.2 inches
Sights: Front.....	Folding blade
Rear.....	Vertical leaf with V notch
Weight: w/o mount.....	24.2 pounds
w/tripod.....	76.2 pounds

S 57



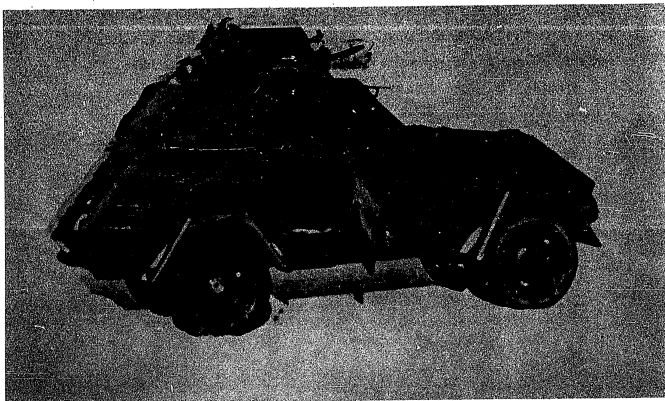
7.92 MM MACHINE GUN MODEL 42 (MG 42)

7.92-mm MACHINE GUN MG42

The MG42 replaced the earlier MG34 during the latter part of World War II. Although similar in general appearance and in mission it was easier to manufacture and to maintain. Like the MG34 it has a quick change barrel. The MG42 is recoil operated, assisted by a muzzle recoil booster. Unlike the MG34 the MG42 fires full automatic only. The MG42 is still employed in East Germany by the Workers Militia, Police, and certain units of the Garrisoned Security Troops.

CHARACTERISTICS

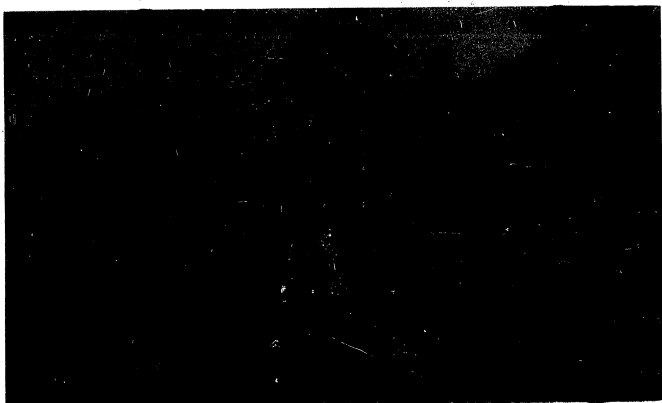
Caliber.....	7.92-mm
Ammunition.....	7.92-mm standard
System of operation.....	Short recoil
Feeding device.....	50-rd metallic non-disintegrating belt
Effective rate of fire.....	250 rounds per minute
Muzzle velocity.....	2475 feet per second
Effective range.....	600 yards
Overall length.....	48 inches
Sights: Front.....	Inverted V on folding base
Rear.....	Tangent leaf open V
Weight: w/o mount.....	23.2 pounds
w/tripod.....	64.2 pounds

**ARMORED CAR SK-1****ARMORED CAR SK-1**

The Sk-1 is a lightly armored combat vehicle employed by the Police and Garrisoned Security Troops of East Germany. It is a post-World War II production item. The Sk-1 has four wheel drive and a 55 horsepower engine. There are three entrance doors, one on each side, and one in the rear. There are two firing ports on each side, and three in the rear. The vehicle armament consists of a 7.92-mm MG34 machine gun. The turret has a traverse of 360 degrees. The vehicle carries a crew of five.

CHARACTERISTICS

Weight.....	12,100 pounds
Length.....	13 feet 1 inch
Height.....	9 feet 2 inches
Width.....	6 feet 7 inches
Armor.....	23/100 inch
Maximum speed.....	65 miles per hour



WATER CANNON SK-2

S 62

WATER CANNON Sk-2

The Sk-2 Water Cannon has been built on the chassis of the G-5, 6x6, Tank Truck. The turret mounted water cannon is located between the vehicle cab and the large water tank to the rear. There are separate power units for the vehicle and for the water cannon. The Sk-2 is used by East German Police and Garrisoned Security Troops for riot control.

S 63



AMPHIBIOUS JEEP P2S

S 64

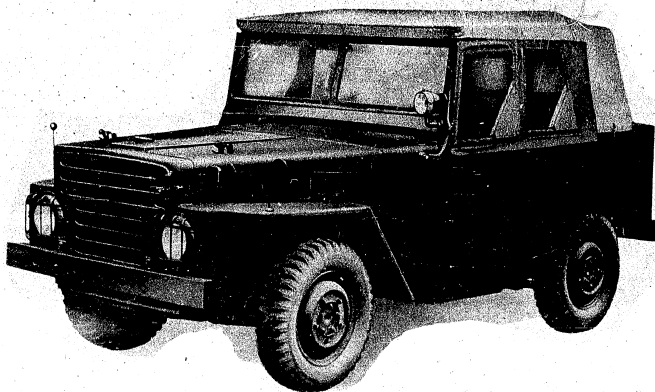
AMPHIBIOUS JEEP P2S

The P2S amphibious jeep is almost an exact copy of the World War II amphibious Volkswagen used by the Germans. On land this vehicle has four wheel drive. The propeller is a three-bladed screw, located in the center rear of the vehicle. The P2S can carry 4 people. It has a canvas top which can be folded down.

CHARACTERISTICS

Length.....	14 feet 1 inch
Width.....	6 feet 3 inches
Height.....	3 feet 3 inches
Speed: Land.....	60 miles per hour
Water.....	7 miles per hour
Engine.....	6-cylinder Horch
Horsepower.....	65

S 65



TRUCK 4x4 P2M

S 66

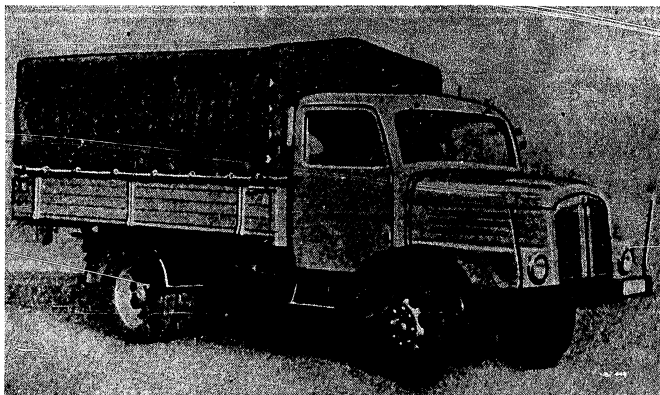
TRUCK, 4x4 P2M

The PK-2 is a 4x4 one-quarter ton personnel carrier. The body is made of thin sheet metal with a folding canvas top and a windshield which may be folded forward to lower the silhouette. It has a 6-cylinder engine and a four speed transmission. A large tool compartment is mounted on the left rear of the body. A spare wheel and tire are mounted on the right rear. The PK-2 is equipped with a central chassis lubrication system. The vehicle normally carries four people.

CHARACTERISTICS

Weight.....	3896 pounds
Wheelbase.....	90 inches
Length.....	12 feet 4 inches
Height.....	6 feet 2 inches
Width.....	5 feet 6 inches
Horsepower.....	65HP @ 3500 rpm
Type fuel.....	Gasoline
Maximum speed.....	50 miles per hour
Payload.....	1000 pounds

S 67



TRUCK CARGO 4 X 2 HORCH H3A

S 68

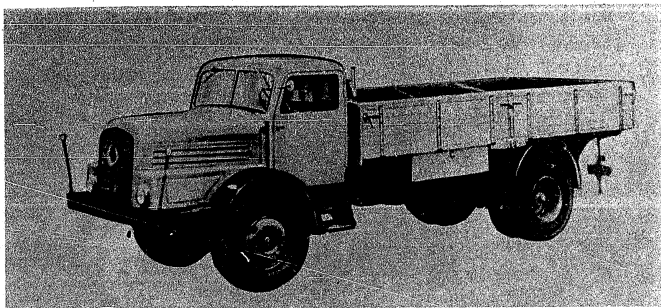
TRUCK, CARGO, 4X2 HORCH H3A

The Horch H3A is a 4x2, 3.5 ton truck. The chassis is equipped with many different types of bodies. It has an all steel cab and is powered by an 80 horsepower diesel. The engine is mounted forward of the front axle. The cab seats three persons comfortably. This vehicle has a five speed transmission. It is believed to be standard equipment in the East German Army.

CHARACTERISTICS

Weight.....	7451 pounds
Wheelbase.....	140 inches
Length, overall.....	21 feet 3 inches
Height, overall.....	7 feet 8 inches
Width.....	7 feet 9 inches
Horsepower.....	80HP @ 2000 rpm
Fuel capacity.....	22 gallons
Maximum speed.....	45 miles per hour
Payload.....	3.5 tons

S 69



TRUCK CARGO 4 X 2 HORCH H-6

S 70

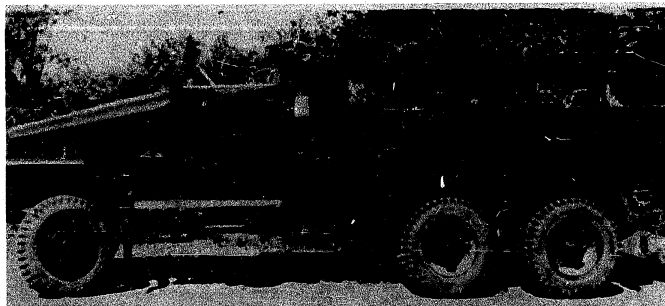
TRUCK, CARGO, 4X2 HORCH H6

The Horch H6 is a 6.5 ton cargo and personnel carrier. It is powered by a 6-cylinder 120 horsepower Diesel engine. The engine is mounted forward of the rear axle. The cab is all metal. The basic H6 chassis is equipped with many different types of bodies. The H6 has a five speed transmission. This vehicle is believed to be standard equipment in the East German Army.

CHARACTERISTICS

Weight.....	13,300 pounds
Wheelbase.....	177 inches
Length, overall.....	26 feet 3 inches
Height, overall.....	9 feet 10 inches
Width.....	8 feet 2 inches
Horsepower.....	120HP at 2000 rpm
Fuel capacity.....	40 gallons
Maximum speed.....	35 miles per hour
Payload.....	6.5 tons

S 71



TRUCK CARGO 6 X 6 HORCH G-5

S 72

TRUCK, CARGO, 6X6 HORCH G-5

The Horch G-5 is a 6x6 cargo and personnel carrier. It is powered by a 120 horsepower Diesel engine. The open cargo body consists of a wooden frame which is covered with sheet steel. It can carry from 30 to 35 passengers. The cab can seat three people. The Horch G-5 chassis mounts three types of bodies: cargo and personnel, van, and tank.

CHARACTERISTICS

Weight.....	7200 pounds
Wheelbase.....	149.6 inches front tandem
	138.8 inches rear tandem
Length, overall.....	16 feet 5 inches
Height, overall.....	8 feet 2 inches
Width.....	9 feet 2 inches
Horsepower.....	120HP @ 2000 rpm
Fuel capacity.....	40 gallons
Maximum speed.....	40 miles per hour
Payload.....	5 tons

S 73

AGL (1) 5-58-4789-66012